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ABSTRACT

This document reviews China's population trends and policies since the People's Republic was founded in 1949. Areas addressed include: population growth before 1949, population growth from 1949-1982, and policy responses to population growth (including wan xi shao: later marriages, longer intervals between birth, and fewer children); mortality reduction; fertility; age/sex composition; marriage; ethnic minorities; education and illiteracy; quality via eugenics; population distribution and policy (urban distribution growth and current urbanization policy); family planning programs (from wan xi shao to one child, from voluntarism to incentives, and one-child campaign results); and current issues and outlook. Selected findings follow. The 1.008 billion July 1982 census total was nearly double the some 540 million population of 1949. Stressing late marriages, long birth intervals, and a two-child family helped halve the reported birth rate from 33.61/1000 population in 1970 to 17.9 in 1979 when the one-child-per-couple drive was launched to counter the impact of the arrival at marrying ages of the large 1960s baby boom generation. Barriers to the one-child family are persistent male preference, inadequate public support for the elderly, high one-child benefit costs, and the new agricultural responsibility system which makes children again valuable as contributors to family income. (Author/JN)

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China: Demographic Billionaire

By H. Yuan Tien

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Abstract—This *Bulletin* reviews China's population trends and policies since the People's Republic was founded in 1949. The 1.008 billion July 1982 census total was nearly double the some 540 million population of 1949. Optimism about growth of over 2 percent a year and two brief family planning programs in the 1950s and 1960s gave way in 1971 to a strong family program based on "state guidance and mass voluntarism." Stressing late marriage, long birth intervals, and a two-child family, this helped halve the reported birth rate from 33.6 per 1,000 population in 1970 to 17.9 in 1979 when the one-child-per-couple drive was launched to counter the impact of the arrival at marrying ages of the large 1960s baby boom generation. By mid-1982, 15 million couples had pledged to have only one child, theoretically entitling them and their children to special benefits, but penalties if the pledge is broken. However, in 1981 the birth rate rose to 20.9 per 1,000 and natural increase (births minus deaths) rose to 1.5 percent, due in part to a surge of marriages under a new law which permits marriage at 20 for women and 22 for men—three to five years earlier than in the 1970s. The current goal of a population of no more than 1.2 billion in 2000 is likely to be exceeded by 150 million. Barriers to the one-child family, especially among the 80 percent of the population in rural areas, are persistent male preference, inadequate public support for the elderly, high one-child benefit costs, and the new agricultural responsibility system which makes children again valuable as contributors to family income. Current population policy also includes prohibition of marriage among close relatives, some fertility limitation among the 55 non-Han minorities (6.7 percent of the total population) formerly exempt from family planning, and relocation of excess rural population in small cities and towns to brake the growth of cities of over 1 million population which has accelerated despite strong anti-urbanization measures since the early 1960s.

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POPULATION BULLETIN

Vol. 38, No. 2, April 1983

THE PEOPLE'S REPUBLIC OF CHINA

China: Demographic Billionaire

By **H. Yuan Tien**
The Ohio State University

1,008,175,288 people make the People's Republic of China the world's first "demographic billionaire." This July 1, 1982, census total—announced on October 27, 1982—reflected an increase of 314 million in the 18 years since the last census in 1964. The average annual gain since 1964 had been 17.4 million people, or 2.1 percent. The preliminary 1982 census figures put the national birth rate for 1981 at 20.9 per 1,000 population and the death rate at 6.4, yielding a rate of natural increase of 14.5 per 1,000, or about 1.5 percent. This was a considerable drop from the 2.3 percent growth rate reported for 1971 when China began "birth planning" in earnest, but an increase over the 1.06 percent annual increase rate reported most recently for 1980.

The 1982 Chinese total is equal to the estimated population on earth in 1850. By 1982, the world's population had more than quadrupled to 4.6 billion; the majority of earth's living inhabitants were born during the most recent 37 years since 1945. Roughly resembling the world pattern, more than one-half of China's billion people in 1982 also began their lives during the 33 years since the proclamation of the People's Republic in 1949.

However, no other single country comes close to China in population size. India's population is the second largest, but its estimated mid-1982 total of 714 million was not quite three-quarters as large as China's. When combined, the third largest population in 1982 (the Soviet Union—270 million) and the fourth (the United States—232 million) still barely exceeded 50 percent of China's 1982 total. China's 1.5 percent rate of natural increase in 1981 was substantially below the estimated 2.4 percent rate for all other less developed countries as a whole at the beginning of the 1980s but more than double the U.S. 1981 natural increase rate of 0.7 percent.[1]

H. Yuan Tien, who was born in China, holds the M.A. in sociology from the University of Pennsylvania and the Ph.D. in demography from the Australian National University. He is currently Professor of Sociology at The Ohio State University. Previously he taught at the University of Wisconsin-Milwaukee and the University of Illinois-Urbana. His numerous publications on China's demographic trends and population policies include China's Population Struggle: Demographic Decisions of the People's Republic *(1973),* Population Theory in China *(1980), and many articles in professional journals, the most recent of which are listed in the* Selected Bibliography *(see page 42). On his most recent visit to China in 1979-80, Dr. Tien lectured at the China Academy of Sciences, the Chinese People's University, and several other universities as a Senior Research Scholar under the first exchange program signed between the Committee on Scholarly Communications of the U.S. National Academy of Sciences and the People's Republic of China after the normalization of relations. As this* Bulletin *goes to press, he is serving as Visiting Professor in the Department of Sociology of Peking University in Beijing.*

Dr. Tien began preparation of this Bulletin *while he was at the Population Reference Bureau in 1981-82 as Andrew W. Mellon Visiting Scholar. Its completion owes much to the help of PRB staff members and to the opportunity to teach a course on China's population in 1982 at the Department of Demography of Georgetown University in Washington, D.C.*

Population pressures

China's population size and growth are both fascinating and worrying. The livelihood of the average Chinese has improved impressively in many respects since the 1950s. The improvements include increases in per capita grain and

Table 1. Indicators of Improvement in People's Livelihood: China, 1952-1980 (Per capita figures unless otherwise indicated)

Item	1980	1952	Percent increase 1952-80
Food supplies			
Grain	427.6 catties[a]	NG[b]	8.2
Vegetable oils	4.6 catties[a]	NG	9.8
Pork	22.3 catties[a]	NG	88.6
Sugar	7.7 catties[a]	NG	320.0
Textiles (cotton and synthetic)			
Overall	31.1 chi[c]	17.1	76.0
Urban	49.5 chi	NG	21.9
Rural	25.8 chi	NG	85.6
Cultural amenities and major consumer goods			
Sewing machines	(46,040,000 units)		
Urban	1 per 2 households		
Rural	1 per 5.7 households		
Bicycles	(96,170,000 units)		
Urban	1.2 per household		
Rural	1 per 3 households		
Wrist watches	(128,000,000 pieces)		
Urban	1 per 2 persons		
Rural	1 per 17 persons		
Hospital beds	(1,982,000 units)		
	2.2 per 1,000 persons	0.3 per 1,000	600.0
(1981)	(2,017,000 units)		
Movie units	(125,000 teams)		
	1 per 10,000 persons	0.2 per 10,000 (1957)	750.0
(1981)	(131,000 teams)		
Newspapers	(14.0 billion issues)		
	4 per 100 persons	NG	500.0
(1981)	(14.1 billion issues)		
Books, etc.	(4.6 billion copies)		
	4.67 per person	NG	240.0
(1981)	(5.6 billion copies)		
Radio stations	106		
(1981)	114		
TV stations	38		
(1981)	42		
TV sets	(9,028,000 units)		
Urban	1 per 6.8 households		
Rural	1 per 53 households		

Sources: State Statistical Bureau, 1981 report, *New China News Agency*, August 12, 1981; and *Xinhua Yuebao (New China Monthly)*, No. 9 (1982) p. 129.

[a]1 catty = 1.1 lbs.
[b]NG = Not given. However, 1952-80 percent increases are shown in the original reports.
[c]1 chi = 13.1 inches.

textile supplies as well as in cultural amenities like movies, books, radio and TV, hospital beds, and consumer goods such as bicycles, sewing machines, and watches (see Table 1). In 1979, because of conversion of arable land to non-agricultural uses, China had 9 percent less land under cultivation than in 1957—1.52 billion mu compared to 1.67 billion mu (1 mu = 1/6 acre). Yet food and fiber production had increased sufficiently in those years to support a population that is as large as the world's in 1850. Agricultural output increased 5.7 percent in 1981 and was projected to increase another 5 percent in 1982. Industrial output went up 5.1 percent in 1981 and a gain of nearly 8 percent was projected for 1982.[2]

However, the impressive gains in total output remain limited in relation to current and future demand for still greater improvement in living standards. Vegetable oils and pork, for instance, are scarce. The 80 percent of people living in rural areas have access to few consumer goods (less than 2 percent of rural households own a TV set, for instance) and 25 to 30 percent of the rural labor force is underemployed or unemployed. Employment is an even greater problem in urban areas, along with housing and transportation, and providing adequate educational facilities is a formidable problem nationwide. In 1979, China's per capita GNP was $253 and the current aim is to quadruple this figure by the year 2000. Total GNP increased 4.5 times in the 28 years from 1953 to 1981, but population growth reduced the per capita gain to a mere doubling.[3]

The fundamental scarcity is arable land. With some 22 percent of the world's population, China possesses only 7 percent of the world's arable land. Only about one-tenth of the country's 9.6 million square kilometers is arable and cultivated land has dropped from 2.7 mu per person in 1949 to a little over 1.5 mu, or one-quarter of an acre per person, in 1979. This is one-ninth of the average in the U.S. and half the average in India.[4]. Expanding land under cultivation appears to have reached a limit. The Ministry of Agriculture recently reported that reclamation had added 250 million mu to the land under cultivation, effectively using up the 500 million mu of reclaimable wastelands estimated to be available in the late 1950s.

Current policies

The huge size and large annual growth of China's population, while not foreclosing the prospects for improvement, have aroused anxieties among policymakers and scholars. Past errors in the management of the country's demographic health have been admitted—unchecked optimism about population growth in the early years of the People's Republic and interruption of the first lukewarm family planning efforts by the Great Leap Forward in the late 1950s and the Cultural Revolution in the late 1960s. Since 1971 China has become a "born-again" advocate of population control.

The *wan xi shao* campaign begun in that year established the three reproductive norms of late marriage (mid-20s for women; late 20s for men), longer intervals between births (three to four years), and fewer children—no more than two per family in cities and three in rural areas. By 1979 it was realized that because of the large number of people born during the 1960s and early 1970s and now starting to marry, even a two-child family would mean continuing population growth for at least half a century. Thus the famous and unique one-child-per-couple campaign was launched. By mid-1982, 15 million couples with only one child had pledged to have no more and received "only child glory certificates," entitling them in theory to bonuses, larger pensions, free health care for their child, and priorities in housing and eventually in school and employment for the single child. Publication of the 1982 census results prompted intensified efforts to attain the current goal of limiting population to no more than 1.2 billion in the year 2000. With hal the

Tema David

China's one-child campaign was launched in 1979 and by mid-1982, 15 million couples with a single child had pledged to have no more.

population aged under 21 and some 13 million couples due to reach marrying and childbearing ages each year over the next 18 years, attaining that goal requires a natural increase rate of under 9.5 per 1,000 population. Added to the revised constitution adopted by the National People's Congress in December 1982 was the stipulation that "both husband and wife have the duty to practice family planning." The constitution of 1978 had declared only that "the state advocates and encourages birth planning." Also in December 1982, the Central Committee of the Chinese Communist Party decreed that "we must popularize the practice of one child for each couple, strictly control second births, and resolutely prevent additional births."[5]

This *Bulletin* traces China's demographic development and resulting shifts in population management since 1949 when the People's Republic was founded. It looks at overall population growth and policy responses, trends in mortality, fertility, population age-sex structure, and marriage, ethnic minorities, concern with population "quality" (education and eugenics), rural-urban distribution and resulting policies, evolution of the family planning program since 1971, and prospects for the future.

Population Growth

Before 1949

In historical times prior to 1650, China's population appears to have fluctuated between 60 and 100 million.[6] Beginning around 1685, however, there was steady growth from about 102 million people to an estimated 413 million a little over a century and a half later on the eve of the Western invasion in the late 1840s.

The population surge prior to the discovery and spread of modern medicine has been attributed to increased agricultural output made possible by the diffusion of imported foodplants (corn, potatoes, sweet potatoes, peanuts) and double- or triple-cropping encouraged by the introduction, for example, of improved, early-ripening varieties of rice.[7] These agricultural patterns—reinforced by high infant mortality—made it expedient for peasants to have large families; more hands meant greater immediate returns and more old age security. However, in the absence of technological change, the traditional labor-intensive, family-centered village economy had a built-in ceiling on growth. After the surge of population growth made possible by increased agricultural output and relative peace, the precarious balance between land and people was merely elevated to a higher plane. With internal strife, aggravated by external invasions from the 1840s onward, China's population fluctuated again, this time around the 400 million mark, to the mid-1940s.

Growth, 1949-1982

The establishment of the People's Republic in 1949 ushered in a period of unprecedented population growth, starting from a population estimated at some 540 million in 1949. Restoration of peace, extension of health and medical services—

especially in urban areas—and land reform combined to drastically reduce death rates from disease and famine. A rapid fall in death rates while birth rates remained high accounted for the first surge in population numbers, as seen in Table 2 (page 8).

Table 2 displays most of the population and vital statistics data available for the nation as a whole since 1949. Twenty years of neglect of demographic matters account for the evident shortage of data. Since the mid-1970s, however, demographic and population studies have been energetically resurrected. With financial and technical assistance from the United Nations Fund for Population Activities, China conducted the 1982 census and began to rebuild demographic institutions. More than two dozen major population institutes, numerous academic journals, and the China Demographic Society have recently come into existence.[8] The quantity of Chinese population statistics are sure to rise shortly to match the country's leading demographic status in the world.

Until the census of 1982, most Chinese demographic data have come from the censuses of 1953 and 1964 and the household registration system, established in the 1950s to record births, deaths, migration, and changes in household composition. These sources have been supplemented since the mid-1970s by statistics gathered and reported by "cadres" at all levels of the birth planning program. Both the census and registration data are known to contain errors and omissions.[9] Much of the census data was apparently not cross-tabulated and little was released, especially for 1964. The registration system was interrupted during the Great Leap Forward and following famine (1958-61) and during the Cultural Revolution (1966-69), and births and deaths, whether or not intentionally, have most probably often been underregistered. More recently family planning officials may have deliberately underreported births to show "accomplishment" in birth planning. However, spot surveys by outside researchers suggest that official figures on births, if not on infant mortality, are increasingly accurate.[10]

In preparation for the 1982 census, a checkup of the registration system was conducted throughout the country during 1981 and early 1982. The final census count for July 1, 1982, coincided almost exactly with the mid-1982 totals projected on the basis of registration for the country as a whole and also the 21 provinces, five autonomous regions, and three province-level municipalities—Beijing (the capital), Tianjin, and Shanghai. Chinese officials have claimed this coincidence as vindication of the registration system and proof of the accuracy of total population estimates officially released each year. Whether such a conclusion is appropriate is open to question. The census counted 3.2 million more births in 1981 than the figure based on household registration and revealed a rate of natural increase (births minus deaths) of 14.55 per 1,000 population that was considerably higher than the rate of "under 12" reported earlier from registration figures for 1981. It has also been suggested that the 1982 census total may represent an undercount of some 5 percent.[11] (The 1970 U.S. census was later estimated to have missed 2.2 percent of the population, while the 1980 U.S. census count of 226.5 million was 2.2 percent more than the 221.6 million that had been previously projected for the U.S. population as of the census date, April 1, 1980.)

Notwithstanding these reservations and the gaps and discrepancies evident in Table 2, the available statistics provide a reasonable picture of population growth in China since 1949.

From the 1840s to 1947, China's annual rate of natural increase averaged under 1 percent.[12] From 1949 through 1957 the rate rose well above 2 percent a year, largely due to the rapidly falling death rate, as seen in Figure 1. Over 104 million people were added in these eight years. This was the first of the two population booms

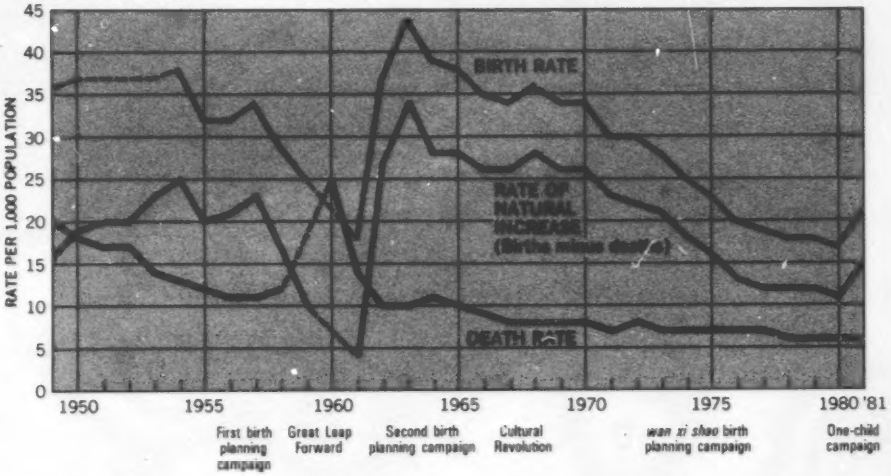
Table 2. Population Totals, Annual Increases, and Vital Rates: China, 1949-1982

Year	Year-end population (in millions)	Net gain in year	Birth	Death (Rate per 1,000 population)	Natural increase
1949	541.67	—	36	20	16
1950	551.96	10.29	37	18	19
1951	563.00	11.04	37	17	20
1952	574.82	11.82	37	17	20
1953	(582.60)[a]				
	587.96	13.14	37	14	23
1954	601.72	14.70	38	13.2	24.8
1955	614.65	11.99	32.6	12.3	20.3
1956	627.80	13.63	31.9	11.4	20.5
1957	646.53	18.25	34.0	10.8	23.2
1958	656.63	—	29.2	12	17.2
1959	—	6.77	24.8	—	10.2
1960	—	—	—	25.4	—
1961	—	—	18.1	14.3	3.8
1962	—	—	37.3	10.1	27.2
1963	691.22	—	43.6	10.1	33.5
1964	(694.58)[a]	—	39.3	11.5	27.8
1965	725.38	—	38.1	9.6	28.5
1966	742.06	16.68	35.2	8.9	26.3
1967	760.32	18.26	34.1	8.1	25.7
1968	781.96	21.66	35.8	8.3	27.5
1969	803.35	21.37	34.3	8.1	26.2
1970	825.42	22.07	33.6	7.6	26.0
1971	847.79	23.37	30.7	7.3	23.4
1972	867.27	19.48	29.9	7.7	22.3
1973	887.61	20.34	28.1	7.1	21.0
1974	904.09	16.48	25.0	7.4	17.6
1975	919.67	15.61	23.1	7.3	15.8
1976	932.67	12.97	20.0	7.3	12.7
1977	945.23	12.57	19.0	6.9	12.1
1978	958.09	12.85	18.3	6.3	12.0
1979	970.92	12.83	17.9	6.2	11.7
1980	982.56[b]	11.63[b]	—[b]	—[b]	12.0[b]
1981	996.22[c]	13.67	20.91[c]	6.36[c]	14.56[c]
1982	(1,006.18)[a]	—	—	—	—

Sources: Compiled from Tian Zuoyuan, "A Survey of Population Growth Since 1949," and Hou Wenruo, "Population Policy," in Liu Zheng, et al, *China's Population: Problems & Prospects* (Beijing: New World Press, 1981) pp. 32-64 and 55-76; and various reports of the State Statistical Bureau, 1979-1982.

[a]Data from censuses of 1953, 1964, and 1982.
[b]Later official figures for 1980 are: net population gain: 10.84 million; birth rate: 18.90; death rate: 6.3; rate of natural increase: 10.64. See M. Li, "Rural Areas Are the Focal Point of China's Population Problem," *Renkou yu Jingji (Population and Economics)*, No. 6 (1982) pp. 3-7.
[c]The State Statistical Bureau also estimated the 1981 year-end population at 1,004.50.

Figure 1. Birth, Death, and Natural Increase Rates: China, 1949-1982



Sources: See Table 2.

since the founding of the People's Republic, with the second coming between 1963 and the early 1970s.

The 1953 census reported a total of 582.6 million and the 1964 census a total of 694.6 million. The intercensal gain was nearly 112 million, or an annual average of over 2.3 percent. The reported gain would have been higher had it not been for the interruption of vital registration during the Great Leap Forward and the drop in births and rise in deaths during that period of economic turmoil when Mao Zedong launched a crash program to decentralize industry and collectivize agriculture, aggravated by crop failures and famine in 1960 and 1961.

Immediately after the crisis, population growth picked up, averaging over 2.6 percent a year from 1964 to 1970—the highest level since 1949. Of the total population increase of some 466.5 million between the end of the 1949 and the census of 1982, about 130 million, or 28 percent, occurred during these six years. Although the death rate continued to fall, the major component of this second population boom was the rise in births. In 1963, 1964, and 1965 the birth rate was around 40 per 1,000—higher than in the 1950s. Although birth rates for the rest of the 1960s were either similar to or slightly below those of the 1950s, and despite the dip in 1960-61, the 1960s stand out clearly as China's first true "baby boom" period.

Population numbers continued to mount during the 1970s, reaching 970.9 million by the decade's end. But the rate of natural increase averaged less than that of the 1950s and much less than that of the baby boom years. The drop to a reported rate of around 1.2 percent in 1979-80 reflected the country's determination to prune fertility during the decade.

Although the rate of natural increase at the beginning of the 1980s was lower than at any time since 1949 (except probably for 1959-61), the annual increase in absolute numbers has increased significantly with the continuing rise in the base population. For example, at least 14 million people were added in 1981 when the natu-

ral increase rate (according to the 1982 census) was 1.5 percent—more than the 12 million added in 1955 when the estimated growth rate was 2 percent (see Table 2). With the cohorts of the baby boom of the 1960s and early 1970s about to enter the marrying and childbearing ages, a second baby boom could be in the offing with rising rates of natural increase and further increases in absolute numbers even if all couples were merely to reproduce themselves—i.e., an average of two children per couple. This is the background to the call in 1979 for the near-universal "one child per family."

Policy responses to population growth

As population numbers change, so do population theories and policies. Sun Yat-sen, found of the Chinese Republic in 1911, had called for an increase in numbers to preserve the Chinese race.[13] Though the pre-1949 population was large, its century-long stagnation was viewed with concern and attributed more to internal injustice and external exploitation than to socioeconomic backwardness.

Thus the surge of population growth after 1949, as confirmed by the census of 1953, was at first greeted with the optimism that prevailed in the aftermath of the successful revolutionary war. Population policy measures were aimed at reducing mortality. Those relevant to fertility directly or indirectly encouraged births; government workers, for example, received extra allotments for each child born. This optimism stemmed from the conviction that, as Communist Party Chairman Mao Zedong put it, "revolution plus production" would solve the problem of feeding and employing China's people.[14] It also echoed the interpretation at that time of the Chinese saying that has been a focus of all post-1949 population pronouncements—*dida wubo rendou*—"vast territory, abundant resources, immense population." *Rendou* can also mean "excess population," as was later stressed, but at the time the saying expressed the view that just as land and natural resources are assets to society, so are people. Mao Zedong proclaimed that "of all things in the world, people are the most precious. . . . As long as there are people, every kind of miracle can be performed."[15] Implicit in this pro-life formulation was a blend of optimism and concern about population matters.

Divergent interpretations of *dida wubo rendou,* however, soon gave rise to a debate on the role of population numbers in China's socioeconomic development so strident that meaningful discussion of the population issue was drowned out for two decades. Also at issue was whether people should be regarded as "hands" (producers) or "mouths" (consumers). In current terminology, the optimistic views of the 1950s may be labeled the "supply-side" perspective on population size and growth. This view sees each person as supplying a pair of hands—hands that, when better organized via revolution, enhance production. The larger the population, the greater the supply of hands, and thus the greater the total production. The pessimistic demand-side view stresses that each person comes with a mouth demanding to be fed gratis, immediately and until adulthood. Demand for goods and services inevitably shoots up as mouths (births) multiply, straining available resources.

The results of the 1953 census did give rise to some government concern and action. Abortion was legalized in 1953 and the first birth planning campaign was launched in 1956, though advocated mostly on the grounds of improving the health of mothers and children. Even Mao Zedong, in a 1957 speech that surfaced two decades later, called for a ten-year family planning program and declared that "as far as procreation is concerned, the human race has been in a state of total anarchy and has failed to exercise control."[16]

However, the first birth planning program came to an end with the start of the Great Leap Forward in 1958 and the supply-siders held forth. Social scientists

who warned of the potential economic problems of continued rapid population growth were denounced as "Malthusianists." Chief among these was Ma Yinchu, who was removed from his position as president of Beijing University and rehabilitated only in 1978.

Population optimism was dimmed by the miscalculations of the Great Leap Forward of 1958-59 and the crop failures and famine of 1960-61. Open discussion of the population issue was not resumed, but a more pessimistic view of *rendou* as "excess population" led to the revival of the family planning program in 1962. This second drive to control population growth was derailed by the Cultural Revolution of 1966-69 when Red Guard activities cut off contraceptive supplies and the Central Party's control over the age at marriage broke down, so that people were free to marry early.

Wan xi shao. With the restoration of order, the third, *wan xi shao* family planning program was launched in 1971. The call came for an end to "reproductive anarchy" and "supply-side" population advocates lost out to demand-side demographics as it became clear that bare hands, however well organized, could not speedily put China's "vast territory" and "abundant resources" to most efficient use. Attention was turned to regulating human reproduction in proportion to "material production"—that is, the means to feed, clothe, and shelter people and to improve living standards. Beginning with the Fourth Five-Year Plan (1971-75) "China has brought population reproduction into the orbit of state economic planning."[17] To promote socialist development, it was necessary "to establish a population plan that is based on the principle of coordination between state guidance and mass voluntarism,"[18] in contrast to capitalist countries where family planning is left up to individual couples.

The relative silence on population numbers came to a close in 1976 with the death of Mao and the subsequent arrest of the "Gang of Four," a group of radicals

Shahid Husain

Controlling population growth has played a key role in China's development planning since 1971.

led by Mao's widow. The party officials who emerged as national leaders were even more committed to birth planning than the previous leaders had been. These post-Mao leaders have given top priority to speeding up realization of "the four modernizations"—agriculture, industry, defense, and technology and science. Controlling population growth plays a key role in this effort. This policy was given official status with its incorporation into the revised constitution of 1978; Article 53 reads: "The state advocates and encourages birth planning." As noted, this constitutional dictum was upgraded in the revised constitution of 1982 to its being the "duty" of couples to practice family planning.

One-child campaign. The already strong family planning program was intensified with the launching of the one-child campaign in early 1979. In August 1979, Chen Muhua, head of the then Birth Planning Leading Group, formally endorsed the "demand-side" view of rapid growth in a *People's Daily* article entitled, "To Realize the Four Modernizations, It is Necessary to Control Popu-

lation Increase in a Planned Way." She noted:

"In the 25 years between 1953 and 1978, consumer income went up by 180 percent, an increase of no mean magnitude. But the population grew by 66.7 percent. As a result, per capita consumption gained by only one-third. Fifty-eight percent of the annual growth in consumption funds had to be diverted to meet the needs of the newly added population, leaving only 42 percent of the increase to improve the living standard of the initial base population. Take grain as an example. The grain output in 1977 was 565.5 billion catties (1 catty = 1.1 lb. or ½ kilo). Compared with the 1951 grain output of 287.4 billion catties, this represents a gain of 97 percent. However, the per capita availability of grain went up to 598 catties from 510 catties, an increase of only 88 catties, or 17.3 percent. . . . In our large country, with over 900 million persons, even a small rise in each individual's demand will produce a startlingly large aggregate figure, exerting great pressure on (for instance) the textile industry (when considering the question of clothing the people). The current market tension reflects not only insufficient output but also population pressure."[19]

Thus the pressure engendered by the population surge since 1949, particularly that of the 1960s, induced a change in theory and in policy. Regulation of population numbers is now defined as a task of "major strategic salience" in the overall plan to modernize the country.[20] This reaction to numbers is not necessarily negative but is also positively rationalized. Article 25 of the 1982 constitution declares: "The state promotes and pursues planned reproduction in order that the population growth will be in accord with various economic and societal development plans." In other words, the taming of fertility is a means rather than an end in itself.

Mortality Reduction

Shortly after 1949, China won a major battle against the ravages of disease, natural disasters, and wars. This set in motion the demographic developments that will undoubtedly double the 1949 population of 542 million well before the end of the century. The opener in this chain of events was a rapid reduction in mortality.

Between 1929-31 and 1938, China's crude death rate dropped from 41.5 per 1,000 population to 28.2. By 1950, the rate had descended to 18. Further steady reduction continued thereafter, except for the famine years of 1960 and 1961 (see Table 2, page 8, and Figure 1, page 9). The rate has been below 10 since the mid-1960s and now lies somewhere between 6 and 7. The 1982 census reported a death rate of 6.36 for 1981. Thus, in the short span of three decades, the reduction in the Chinese crude death rate amounted to as much as the decline in the U.S. death rate from 1800 to the 1970s. The U.S. rate fell to 9 in 1979 from around 27-28 at the beginning of the 19th century.

Restoration of peace in 1949 undoubtedly contributed a great deal to the Chinese mortality decline during the initial phase. One of the immediate effects was that continued high fertility increased the proportion of young people in the population. This accounts for part of the decline in the crude death rate which relates deaths to the total population; deaths are less likely among the young than among the elderly proportion of a population. Incomplete registration of deaths may also very well have exaggerated the mortality decline, particularly when registration depends on reporting after the fact by survivors.[21] Registration of infant deaths has probably been especially deficient, partly because of the practice of not registering births and deaths of infants who die shortly after delivery.[22]

Possible flaws in the data, however, cannot alter the basic fact that China's mortality decline since 1949 has been speedy and substantial. Health resources were too limited at the outset to account for the initial decline but the continuing decline can be largely attributed to subsequent expansion in the fields of public health and medical care, particularly during the Cultural Revolution

Table 3. Health Care Personnel: China, 1979, 1980, 1981

(Numbers in thousands)

Type	1979	1980	1981
Medical personnel			
College-graduated physicians	395	447	516
Graduates of secondary medical schools	435	444	436
Senior physicians trained in traditional and western medicine			2
Practitioners of traditional medicine	258	262	290
Nurses	421	466	525
Other[a]	1,133	1,179	1,242
Total	2,642	2,798	3,011 (2,948)[b]
Rural barefoot doctors	1,576	1,463	1,393

Source: State Statistical Bureau, *Statistical Yearbook of China 1981*, English edition (Hong Kong: Economic Information & Agency, 1982) pp. 477 and 479.

[a]Pharmacists and antiepidemic workers.
[b]Figure for health personnel in rural areas, of whom 1.485 million are identified as "qualified doctors, nurses, and pharmacists." Published in *Beijing Review*, No. 47, 1981, p. 8.

when medical personnel were dispatched throughout the country to initiate health care for the previously almost unserved rural population.

Health care resources

In 1949 China had about 500,000 "medical personnel." By 1981 the number had increased nearly sixfold to just over 3 million, while the total population had not yet doubled.[23]

Table 3 shows State Statistical Bureau data for 1979-81 on "medical personnel in health institutions" and part-time "rural barefoot doctors." Another source states that an additional 2.6 million "health workers and midwives" were at work in rural areas in 1981.[24]

Much of the credit for China's remarkable mortality decline is probably due to the basic preventive health measures and simple medical care, such as first aid treatment, dispensed by barefoot doctors in rural areas, of whom there were 1.4 million in 1981—about one for every 600 rural inhabitants. About a third of the barefoot doctors are women who include contraceptive counseling, IUD insertions, and sometimes abortions among their tasks. The burden of curative medicine, however, rests with physicians who have formal training in western and/or traditional medicine. Counting the graduates of secondary medical schools, there were 1.2 million of these physicians in 1981—nearly 3½ times the number in 1949. This amounted to 1.29 such trained physicians per 1,000 population compared to 0.74 per 1,000 in 1952.[25]

There were more than 2 million hospital beds in 1981, or about two per 1,000 population. Of these, 1.2 million reportedly were in rural hospitals.

China's rural health care system is organized on three levels. At the top are the more than 2,000 counties, which in 1981 each had its own general hospital, antiepidemic station, maternal and infant health clinic, health personnel training school, and one or more pharmacies. These are funded from the national budget. Below that are health centers at the commune level; 55,000 or 90 percent of communes had such a center in 1981, two-thirds established by the communes themselves and financed by county and provincial subsidies and user fees. There were 61,000 health stations operating in 1981 at the next lower level of the production brigade; these are funded by allocations from the brigade's welfare fund and user fees. Barefoot doctors work at this level and also go out to provide care to the 10 or so production teams which make up each production brigade. Production teams, the lowest level in rural China's administrative and production system, average 200-800 people.[26] Health care for urban dwellers is organized in a similar way, except that urbanites who work at large state enterprises can get free preliminary health care where they work. Others, like rural dwellers, pay for all health services, except for family planning.

Stanley Music

China's remarkable mortality decline owes much to rural barefoot doctors like these two in Sichuan province.

Life expectancy

China's State Statistical Bureau has reported that life expectancy at birth stood at 68 years in 1978, up from 57 years in 1957. For women, the average was 69 years, and for men, 67 years.[27]

The release in 1980 of age-specific mortality data collected in a 1975 countrywide survey of registered deaths provided outside researchers a rare opportunity to check officially reported Chinese figures for life expectancy. U.S. demographers Judith Banister and Samuel Preston calculated that, when adjusted for plausible estimates of underregistration, these data implied a life expectancy of 62-64 for both sexes combined in 1972-75, compared to 66 based on the unadjusted data.[28] They point out, however, that even the lower figures indicate that "China has probably gained on average over 1.5 years of life expectancy for each calendar year since [1949]. This is a record of sustained and rapid progress that has seldom been matched." At 62-64, China's expectancy was about 10 years above the United Nations estimate of life expectancy for developing countries as a whole in 1970-75—a record all the more remarkable in light of the fact that China's per capita GNP ($230 in 1978) was far below that of many of these countries.

There are still wide variations in life expectancy. Averages are higher in the more heavily populated and advanced northeastern provinces and coastal areas, which include the three largest cities—Beijing, Shanghai, and Tianjin—than in inland and border regions, such as Guizhou, Yunnan, Quinghai, Xinjiang, and Tibet. (See map on page 2 for location of these areas.) In 1973-75, the differences were almost 11 years for male life expectancy (69.9 versus 59.0 years) and more than 15 years among females (74.8 versus 59.5 years).[29]

Infant mortality

The remarkable gains in life expectancy reflect the great improvement in mortality overall and particularly much lowered rates of infant mortality. In the 1930s, estimates of infant mortality in different provinces ranged between 150 and 220 infant deaths under age one per 1,000 live births.[30] By the mid-1950s, reported rates had generally dropped to the low-30s to low-40s in urban areas and to about 75 in rural areas. For 1978, the reported rates were down to about 12 in urban areas and 20-30 in rural areas.[31] (The overall U.S. infant mortality rate in 1978 was 13.8.)

However, infant mortality rates markedly higher than the reported rates for 1978 appear to persist in many parts of the country. A major study conducted in 1977 revealed large regional and urban-rural variations. In 12 cities, the rate in 1974-76 averaged 14 per 1,000 live births. But 13 suburban counties reported an average of nearly 33 and in six rural counties in mountainous regions the rate was close to 64. In Sichuan, China's most populous province (nearly 100 million in 1982), household registration data for three counties indicated an infant mortality rate of 44 in 1977. Chengdu, Sichuan's capital, reported a rate of 15.8 for its eastern urban district and 19.7 for its western urban district. In the largely rural Shuangliu county, still within the

Table 4. Seven Leading Causes of Death Among Children Aged 0-14: Shuangliu County, Chengdu Municipality, Sichuan, 1974-1977

Cause of death	Number (percent)	Age of death			
		Under 1	1-4	5-9	10-14
Accidents	2,700 (29)	1,131 (23)	1,181 (38)	310 (36)	75 (27)
Diseases of infancy	1,724 (19)	1,724 (35)	—	—	—
Respiratory	1,641 (18)	1,009 (21)	557 (18)	65 (8)	10 (4)
Contagious	1,280 (14)	217 (4)	756 (24)	243 (28)	64 (23)
Gastrointestinal	590 (6)	232 (5)	244 (8)	84 (10)	30 (11)
Malnutrition	321 (3)	166 (3)	145 (5)	9 (1)	1 (—)
Congenital malformation	184 (2)	141 (3)	26 (1)	9 (1)	8 (3)
Other	762 (8)	288 (6)	245 (8)	144 (17)	85 (31)
Total	9,202 (100)	4,908 (100)	3,157 (100)	864 (100)	273 (100)

Source: *Shuangliu County Retrospective Infant and Child Mortality Investigation*, 1979.

Chengdu municipal boundaries, the rate averaged 71.9 in 1974-77.[32]

Findings in Shuangliu county (with a population of 744,000 in 1979) shed light on some aspects of infant and child mortality. Part of the 1977 national investigation, this local inquiry covered deaths among children aged 0-14 during 1974-77, as reported by parents and others in 1977 (see Table 4). There were 9,202 such deaths during these four years. Of these, 4,908 (53 percent) occurred to infants under age one. Tetanus and pneumonia, two age-old causes, accounted for 39 percent of the infant deaths. As shown in Table 4, 50 percent of the deaths among children aged 1-4 were due to diseases of the respiratory and gastrointestinal tracts and other contagious diseases. Accidents of all types, particularly drownings and asphyxiation, were also devastating. Malnutrition was still among the seven leading causes of deaths for infants under age one and children aged 1-4. Some 87 percent of Shuangliu's deaths among children under age 15 involved children under age 5.

Whether or not a retrospective study in one area accurately reflects infant and child mortality in rural China must, of course, await further verification. But in reporting these data, the parents and other respondents evidently believed in and would understandably be influenced by them. Infant and child mortality apparently remains unacceptably high in many of the rural areas where 80 percent of China's population lives. This is recognized as a major problem in the effort to promote the one-child-per-family norm. The Ministry of Health called in 1980 for reduction in rural infant mortality to below 25 per 1,000 live births, but termed it "an enormously difficult task." Among the incentives promised to couples who pledge to stop at one child are priority health

care for that child at no cost. (As noted, most medical services require individual payments of some kind. All contraceptive services, however, are free.)

Fertility

China's reported crude birth rate has followed five different patterns since 1949: an almost flat line in 1949-54; wide fluctuations in 1955-65; a small downturn in 1966-69; a sharp drop during the 1970s; and an upturn from 1980 to 1981.

1949-54. As seen in Table 2 (page 8), the reported rate in this first period varied only from 36 to 38 births per 1,000 population. With the restoration of peace and production in these early post-revolutionary years it might be expected that marriages and thus fertility at least varied from year to year. But the data show little indication of this. Thus the actual fertility level of this initial phase can only be roughly surmised. Some estimates by Chinese demographers at the time put the crude birth rate at or near 40 per 1,000 population.

1955-65. The reported rates were most volatile in this second period. (See also Figure 1, page 9.) The short-lived birth planning campaign of 1956-57 probably played some role in the marked drop in reported rates at the beginning of the period. But the sharp drop to 1961 probably resulted mostly from the chaos created by the Great Leap Forward in 1958-59 and the famine of 1960-61, accompanied by deterioration in birth registration in these four years. The sharp upturn in 1963-65 undoubtedly reflects both a boom in marriages and births to make up for the preceding four years and more accurate recording of births.

1966-69. A small downward movement in the birth rate during this third phase coincided with the Cultural Revolution. Encouraging fertility was not among its aims, but the Cultural Revolution in fact ended the second drive to limit fertility begun in 1962. Also, the "rustication" campaign during these years mobilized large numbers of urban youths to settle in the countryside and remote border regions and this evidently slowed marriage and reproduction during the second half of the 1960s. Another factor may have been voluntary fertility reduction in response to the depressed socioeconomic conditions, particularly in urban areas.

Despite the slight drop in the birth rate, close to twice as many people were being added to the population each year in the late 1960s as in the early 1950s (see Table 2). Fertility was still high, if declining slightly, and the death rate was much lower. Also, as noted, the considerable expansion in the base population size was beginning to make an impact. In absolute numbers, notwithstanding the sharp drop in the birth rate at the beginning of the decade, the 1960s turned out to be the most impressive Chinese baby boom of contemporary times.

1970-79. Immediately thereafter, however, a distinctly different fertility pattern quickly transpired. With the intensified efforts to promote population planning, the reported birth rate was nearly halved from 34 in 1970 to just under 18 in 1979. Chinese birth planning officials have calculated that this administratively induced fertility plunge reduced the country's daily total of births from nearly 75,000 in 1970 to about 47,000 in 1979. Overall, it averted more than 56 million births that would have occurred in 1970-79 if the birth rate had continued at the pre-1970 levels.[33]

1980-81. In its *1982 World Population Data Sheet*, published in April 1982, the Population Reference Bureau placed the Chinese birth rate at 22 and the rate of natural increase (births minus deaths) at 14 per 1,000 population. These estimates based on incomplete data compared well with the most recent official Chinese data. According to the 1982 census results released in October 1982, more than 20.7 million births occurred in 1981, yielding a birth rate of nearly 21 per 1,000 population. The rate of natural increase was 14.6.

As there is no evidence of unusual change in the death rate, these data indi-

Table 5. Population Age Composition and Median Age: China, 1929-31—1978

Year	Age group percent of total population						Median age (years)
	0-4	5-9	10-14	15-49	50-64	65 +	
1929-31	13.5	11.9	9.8	51.3	10.1	3.3	—
1953	15.7	11.1	9.5	49.5	9.8	4.4	21.7
1964	14.4	13.6	12.4	47.8	8.8	3.5	19.4
1975	10.9	13.1	12.8	48.8	9.6	4.8	20.5
1978	9.7	13.2	13.0	49.3	10.0	4.8	21.5

Sources: 1929-31: C. M. Chiao, "A Study of the Chinese Population," *Milbank Memorial Fund Quarterly*, Vol. 12 (1934) Tables 6 and 10, pp. 85-96; 1953, 1964, 1975: Adapted from Z. Liu, et al, *Renkou Tongjixue (Population Statistics)* (Beijing: Chinese People's University, 1981) p. 32; 1978: Calculated from Deqing Yang, et al, *Renkou Tongjixue (Population Statistics)* (Shijiazhuang, Hebei: Hebei People's Publishing Co., 1981) p. 135.

cate an upturn in the birth rate since 1980. This probably signals the start of a relatively long-term trend as the large cohorts of men and women born during the 1960s baby boom arrive at marriage and childbearing ages over the coming decade. Another influence, however, was the boom in marriages in 1981 among men and women in their early twenties, made possible by implementation of the 1980 Marriage Law (see page 20). This law set the legal age for marriage at 20 for women and 22 for men—considerably lower than the ages promoted in the interest of fertility reduction during the 1970s.

In September 1982, the State Birth Planning Commission initiated China's first fertility survey. Based on a one-in-1,000 sample of women of childbearing age throughout the country, the four-month survey was designed to obtain data for population planning and forecasts. When the findings are released, much more light will be shed on recent patterns and trends in marriage, fertility, and fertility limitation in China.

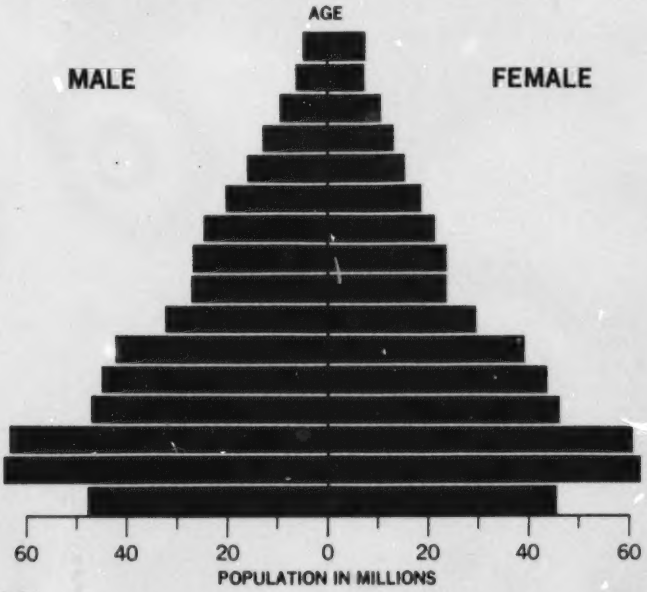
Age and Sex Composition

The age and sex composition of China's population—as in all populations—reflects past trends in fertility and mortality and, in turn, will have a strong bearing on future population growth. The available data on age and sex are particularly limited and must be interpreted with caution because of unknown margins of error. This should change with release of detailed data on age and sex from the 1982 census, expected in 1984.

Age composition

With relatively high fertility and low mortality during most of the nearly 3½ decades since 1949, China has been and is still a "young" population. As seen in Table 5, children under age 15 comprised 36 percent of the total population in 1953, slightly more than in 1929-31. This proportion climbed to over 40 percent at the time of the 1964 census and had shrunk only to just under 36 percent in 1978. The percentage of children under age five has changed most, reflecting swings in the birth rate: up to more than 14 percent of the total population at the peak of the 1960s baby boom in 1964 and down to just under 10 percent in 1978 as the 1970s "baby bust" was played out. Meanwhile, the proportion of elderly persons aged 65 and over remained below 5 percent. As a result, China's median population age was still a low 21.5 years in 1978. (The U.S. median population age was 29.5 in 1978.) With the birth rate declining rapidly—at least to 1980—and the death rate remaining low, the population will age rapidly from now on. This will be particularly true if the one-child family does indeed become universal in the near future. U.S. demo-

Figure 2. China's Population Age-Sex Composition: 1978.



Source: See Table 6.

grapher Ansley Coale has calculated that with a fertility decline fast enough to achieve zero population growth by the year 2000 (the original target of the one-child campaign), by 2035 about one-quarter of the total population would be over age 65.[34] This compares with a current 10 to 15 percent in developed countries (just over 11 percent in the U.S.), where social security for the elderly is already a large burden on national budgets.

For the next two decades, however, the proportion of the population that supports the elderly, those in the working ages of 15-64, will grow rapidly as the children of the 1960s baby boom enter these ages. That cohort is represented in the extra wide bars at ages 5-14 in China's age-sex population pyramid for 1978 (see Figure 2). If the birth rate resumes its downward trend of the 1970s, the increasing proportion of the elderly will be offset by a rapidly declining proportion of children under 15 and the dependent share of the population (those aged 0-14 plus those of 65 and over) will drop from 41 percent in 1978 to about 20 percent in 1990.[35]

The entry of the large 1960s baby boom cohort into adulthood could also change that scenario, however. With so many of them due to marry during the rest of the 1980s and in the 1990's, numbers of births and the crude birth rate will inevitably rise unless each couple's family size can indeed be sharply restricted.

Sex ratio

The emancipation of women has made great strides in modern China, but the popular saying, "Women hold up half of the sky," is not yet true numerically speaking. China is still one of the few countries in the world, along with India and a few others in Asia, where men out-

Table 6. Population Sex Composition: China, 1953, 1978, and Local Area, 1980

Age group	1953 Sex ratio[a]	1978 Total	1978 Males	1978 Females	1978 Sex ratio[a]	1980 Sex ratio[a] (local)
		Numbers in thousands				
0-4	106.3	93,201.9	48,034.8	45,167,3	106.3	105.5
5-9	112.0	126,601.4	64,691.0	61,910.0	104.5	105
10-14	112.2	124,058.1	63,589.8	60,468.3	105.2	105
15-19	111.3	93,214.9	47,390.5	45,824.4	103.4	104
20-24	111.6	88,875.8	45,409.0	43,466.8	104.5	110
25-29	112.0	81,118.5	42,208.4	38,910.1	108.5	113
30-34	112.5	61,389.8	32,175.9	29,213.9	110.1	113
35-39	109.4	50,712.3	27,169.9	23,542.4	115.4	107
40-44	107.7	50,392.2	26,915.3	23,476.9	114.6	119
45-49	105.6	45,832.2	24,446.4	21,385.8	114.3	118
50-54	102.8	38,555.8	20,160.8	18,395.0	109.6	116
55-59	99.0	31,275.2	16,004.5	15,270.7	104.8	111
60-64	96.9	25,904.1	12,894.1	13,010.0	99.1	103
65-69	93.7	19,755.1	9,470.0	10,285.1	92.1	96
70-74	93.3	13,702.2	6,169.9	7,532.3	81.9	88
75 and over	68.2	12,764.8	5,075.8	7,689.0	66.0	76
Total	107.7	957,354.3	491,806.5	465,547.8	105.6	106

Sources: 1953: Adjusted from Y. C. Yu, "The Demographic Situation in China," *Population Studies*, Vol. 32, No. 3 (November 1978) Table 5, p. 442; 1978: Adapted from Yang Deqing, et al, *Renkou Tongjixue (Population Statistics)* (Beijing: 1981) p. 135; 1980: local data from Bingjin Zhuang and Xinmei Huang, "A Projection of the Population of Three Countries in Zhejiang Province," *Renkou Yanjiu (Population Research)*, No. 3 (1981) Table 1.

[a]Sex ratio = number of males per 100 females.

number women in the total population. The preliminary 1982 census release reported 30.7 million more men than women and a sex ratio of 106.3 men per 100 women. This was an upturn from the overall sex ratio of 105.6 for 1978 shown in Table 6 and a reversal in the declining trend evident from the few available data. In 1929-30, the countrywide estimated sex ratio was 109 men per 100 women. The 1953 census indicated a sex ratio of 107.7, and the 1964 census a sex ratio of 105.5 men per 100 women. (The sex ratio in the U.S. at the time of the 1980 census was 94.5 men per 100 women.)

Derived from presumably official sources, Table 6 shows sex ratios and numbers of men and women by age for the country as a whole in 1978, countrywide sex ratios by age based on the 1953 census, and similar sex ratios from one local study for 1980. All three sets of statistics indicate that women are outnumbered by men throughout infancy, adolescence, and the childbearing ages. At ages 30-49, the excess of men over women ranged up to 15 percent in 1978 and even higher in the local data for 1980 (Table 6, last column). The sex imbalance at these ages suggests that maternal mortality remains relatively high. But the main explanation for the overall excess of men is the persistence of the traditional preference for males. In the past and still today, this has led both to underreporting of females, especially infants, and female infanticide or at least maltreatment that endangers women's health and survival.

Male preference has resurfaced strongly with the one-child campaign. The recent rise in the sex ratio could be

partly due to underreporting of female births by parents who deliberately avoid registering a firstborn female child in order to have another chance. Also, reports of female infanticide are increasingly frequent.[36]

The country's leaders are trying to combat the age-old male preference. Billboards and pamphlets advocating the one-child family invariably show adoring parents with a single small happy daughter. In his report on the Sixth Five-Year Plan (1981-85) which was approved by the National People's Congress in December 1982, Premier Zhao Ziyang stated:

> "Persuasive education must be conducted among the people of the whole country, especially among the peasants, to change radically the feudal attitude of viewing sons as better than daughters. . . A couple that has only one daughter and brings her up well deserves greater commendation, support and reward than a couple that has only one son. . . The whole society should resolutely condemn the criminal activities of female infanticide and maltreatment of the mothers, and the judicial departments should resolutely punish the offenders."[37]

Changing feudal attitudes will be difficult in rural China, however. Among China's peasant majority girls are still not accepted as equal workers or adequate old-age security. Of couples signing the one-child pledge, two-thirds are the parents of baby boys.[38]

Marriage

Marriage is a particularly important variable in Chinese fertility since births occur almost exclusively within marraige, virtually all men and women marry at the earliest permissible age, and newlyweds traditionally practice no contraception before the first pregnancy.

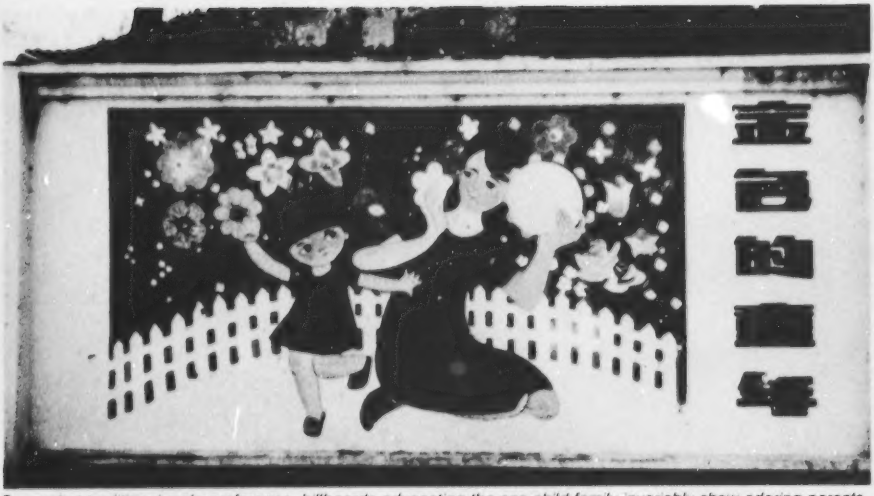
Data prior to 1949 indicate that age at marriage averaged 17-18 for women and 20-21 for men; 90 percent of women married before age 20 and few of either sex remained single after age 25. To discourage marriages even earlier than the average and arranged marriages, the Marriage Law of 1950—the first social legislation of the People's Republic—set the minimum legal age for marriage at 18 for women and 20 for men. Though not overtly aimed at population control, this paved the way for emphasis on marital postponement in the later birth planning campaigns, beginning with the first in 1956-57.[39]

Delayed marriage became the leading injunction in the *wan xi shao* campaign of the 1970s and a major factor in the rapid fertility decline of that decade. Administrative rules, going far beyond the terms of the 1950 Marriage Law, prohibited marriage before 23 for women and 25 for men in rural areas and 25 and 28 in urban areas. Typically, a prospective bride and groom could not obtain the "letter of introduction" required from the heads of their work units in order to marry until their combined ages added up to 50 or 52.[40]

A "late marriage rate" became a measuring rod for evaluating program success at the grassroots level. This was calculated as the percentage of couples married in a calendar year who conformed to the rural 23/25 and urban 25/28 rules. The higher the rate, the greater the praise for the local birth planning unit.

1980 marriage law

The long-run intent of this heavy stress on delayed marriage is to lengthen the time between generations and thus reduce population growth over the long term. However, as seen in the 1970s, the short-run reduction in fertility can also be considerable if a large number of young people delay marriage. Conversely, a sudden rush of earlier marriages can virtually ensure a sharp rise in the birth rate a year later. This is what happened in China after the new marriage law of 1980 went into effect on January 1, 1981. The law raised the legal age for marriage to 20 for women and 22 for men, but in fact made it possible for young people to marry from three to five years earlier than had been allowed during the 1970s.



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To combat traditional male preference, billboards advocating the one-child family invariably show adoring parents with a single, happy daughter, like this one which extols "the Golden Age of Childhood."

Why were Chinese authorities persuaded to relax the marriage age restrictions from which the country had derived considerable benefit? One answer seems to be that the policy was seen to be creating potentially serious social frustration. This is suggested by the fact that rape was listed prominently among severely punishable crimes in the revived criminal code of 1979. Also, as pointed out by Kang Kequing, Chairperson of the All-China Women's Federation, the stringent restrictions had prompted an increase in the number of couples living together before marriage and revival of the old custom of holding "weddings" among family members and friends to gain social recognition if not legal sanction. Counting in informal premarital unions and unregistered "social" marriages, the actual ages for initiating sexual intercourse had probably averaged around 21-22 for women and 23-24 for men.[41] Lowering the permissible ages for marriage to 20 and 22 would bring policy closer to socio-demographic realities, help reduce unregistered "marriages" and premarital unions, and lessen tensions among young people already frustrated by the lack of employment opportunities.

The Chinese experience thus demonstrates the limitations of dictated late marriage as a long-term means of population control. With the restrictions off, first marriages were officially projected to climb to at least 14 million in 1981—more than twice the number in 1980. This undoubtedly accounts for much of the rise in the birth rate in 1981 and will make it much harder to attain low population growth targets in the next few years.

However, it is the coming-of-age of the 1960s baby boom cohorts that will keep marriages high; some 11-14 million marriages are expected annually over the next 15 years. Without a change in contraceptive patterns, a second baby boom that could dwarf that of the 1960s will inevitably follow. Recent surveys indicate that 65 percent of Chinese women become pregnant within three months after marriage and more than 85 percent are pregnant within the first year. The main reasons are evidently the lack of any contraceptive efforts before the first pregnancy, along with high frequency of intercourse during the most fertile ages and premarital pregnancy.[42]

Although late marriage is still being

promoted, birth planning officials recognize that this is no longer sufficient with the prospective surge in the fertile-aged population and have recently given more emphasis to "late reproduction"—contraceptive use at the outset of marriage to avoid immediate childbearing.

Ethnic Minorities

Often masked by the term "Chinese" is the fact that the country's population includes 55 ethnic minorities besides the dominant Han. Some of the "subnationalities" number only a few thousand people each, but at least 13 groups, according to a 1978 estimate, number over a million (see Table 7). The 1982 census counted a minority population of 67.2 million. This was only 6.7 percent of the total population but China's minorities have a political and economic significance disproportionate to their numbers. This is because they are mostly concentrated in some 55 percent of the country's territory, much of it relatively sparsely populated and unsuitable for agriculture but rich in oil, minerals, forests and pastoral plains, and most of those areas are strategically sensitive border regions like Xinjiang, Inner Mongolia, Tibet and Yunnan (see Table 7 and the map on page 2). Mao Zedong stipulated in 1957 that fertility limitation "should not be promoted in the minority nationality areas."[43] Until recently, well-

Table 7. Ethnic Minorities: China, 1953 and 1978

Ethnic group (Area of concentration)	Number (in thousands) 1953	1978
Mongolian (Inner Mongolia, Xinjiang, Gansu)	1,460	2,660
Hui (Ningxia, Gansu, Henan, Hebei, etc.)	3,560	6,490
Tibetan (Tibet, Qinghai, Sichuan, etc.)	2,770	3,450
Uighur (Xinjiang)	3,640	5,480
Miao (Guizhou, Hunan, Yunan, Guangxi)	2,510	3,920
Yi (Yunnan, Sichuan, Guizhou)	3,250	4,850
Zhuang (Guangxi, Yunnan, Guangdong	6,960	12,090
Buyi (Guizhou)	1,250	1,720
Korean (Jilin, Liaoning, Heilongjiang)	1,120	1,680
Manchu (Liaoning, Jilin, Heilongjiang)	2,420	2,650
Tong (Guizhou, Hunan, Guangxi)	710	1,110
Yao (Guangxi, Hunan, Yunnan, Guizhou, etc.)	670	1,240
Dai (Yunnan)	570	1,050
Tujia (Hunan, Hubei)	590	770
Hani (Yunnan)	480	960
Kazak (Xinjiang, Gansu, Qinghai)	509	800
Thai (Yunnan)	470	760
Li (Guangdong)	360	680
Lisu (Yunnan)	317	470
Va (Yunnan)	286	260
She (Fujian, Zhejiang, Jingxi, etc.)	219	330
Gaoshan (Fujian)	200	300
Lahu (Yunnan)	139	270
Shui (Guizhou)	133	230
Dongxiang (Gansu)	155	190
Naixi (Yunnan)	143	230
Jingpo (Yunnan)	100	83
Kirgiz (Xinjiang)	70	97
Tu (Qinghai)	53	120
Daur (Heilongjiang, Xinjiang)	440	78
Mulam (Guangxi)	18	31
Qiang (Sichuan)	35	85
Pulang (Yunnan)	35	52
Salar (Qinghai, Gansu)	30	56
Maonan (Guangxi)	18	31
Gelo (Guizhou)	43	73
Xibe (Xinjiang, Liaoning)	19	44
Achang (Yunnan)	17	18
Tajik (Xinjiang)	14	22
Other[a]	133	370
Total	35,520	55,800

Source: Zhang Tianlu, "Promote Population of the Minorities According to Plan and Stimulate Prosperity of the Nationalities," *Renkou yu Jingji (Population and Economics)*, No. 1 (1980) pp. 27-34.

[a]Other ethnic groups include the Pumi, Nu, Eluosi, Ewenki, Benglong, Bonan, Yugur, Jing, Tatar, Drung, and Orogen.

publicized reports have hailed rapid population growth among the minorities, crediting it to improved living conditions and wider diffusion of medical services. The 1982 census indicated that the minority population had grown by 68.4 percent, or 27.3 million, since 1964, compared with an increase of 43.8 percent, or 285.4 million, among the Han majority.

Now, however, the decision to exempt ethnic minorities from the national drive to limit fertility seems to have been all but officially rescinded. In 1980 it was stated that minority population growth should be "in a controlled manner."[44] The plans for stepped-up population control issued by the Communist Party Central Committee in December 1982 included the injunction, "We should also promote family planning among national minorities," though adding the reservation, "but we may relax the demands for them as appropriate."[45] Since July 1982, the Li and Miao minorities on the island of Hainan in the South China Sea have been limited to four children per couple and there have been unconfirmed reports that family planning is being encouraged among larger minorities in heavily populated areas, such as the Dai in Yunnan and the Zhuang in Guangxi.[46]

Education and Illiteracy

Upgrading the skills and productivity of China's masses of workers is recognized as a key to hastening the "four modernizations"—of agriculture, industry, defense, and technology and science—that have shaped the country's plans for economic development since the mid-1970s. Rapid population growth and budgetary constraints, however, make this a formidable task.

The 1982 census findings released in October 1982 provide the latest statistics on educational attainment of the population.[47] At the upper end of the scale, only 0.6 percent of the population, or just over 6 million people, have some university education (graduates, current undergraduates, and dropouts). Some 6.6 percent—66.5 million—have at least some senior middle school education. Graduates, those currently enrolled, and dropouts for the junior middle school level comprise 17.7 percent of the total population, or 178.3 million, and for the primary school level the figures are 35.3 percent, or 355.2 million people. In the late 1970s, it was estimated that more than one-half of government workers had not gone beyond primary school. The 1982 census also reported that 235.8 million people aged 12 and older—23.5 percent of the total population—declared themselves as illiterate or semi-illiterate—defined as unable to read or able to read only a few words.

These figures, nevertheless, represent some gains. The percentage of illiterates and semi-illiterates, for example, had dropped from the 38.8 percent registered by the 1964 census. The proportion with at least some primary school education was up from 28.3 percent in 1964, and the university figure was up from 0.4 percent.

As shown in Table 8 (page 24), excluding infants in nurseries, some 206 million students were enrolled in schools of all types in China in 1980. Of these, only 29 percent were enrolled above the primary school level. Some 6 to 7 percent of primary-school-aged children were not enrolled in school.

Based on sample surveys of 1975 and 1978, one scholar estimated that in 1980, China had 322.6 million children and adolescents aged 6-18 born during the baby boom years of 1962-74. He calculated that, unless educational facilities expand rapidly, at least 20 million of these children will reach adulthood as illiterates; 36.4 million will have to stop with a primary school education; 133.4 million will find no place in senior middle schools; and less than 1 percent will go on to university.[48]

During 1979-81, new admissions to colleges and universities averaged about 275,000 a year (Table 8). In 1981, 1.28 million students were enrolled in 704 in-

Table 8. School Enrollment: China, 1978-1981

(Numbers in thousands)

Level	1978	1979	1980	1981
Colleges and universities				
(Number of schools)	(598)	(633)	(675)	(704)
Total enrollment	856	1,020	1,144	1,280
New admissions	—	275	281	271
Students abroad	—	1.8	2.1	—
TV universities	—	280	324	—
Factory-run and evening colleges	—	580	455	—
Polytechnic schools	889	1,199	1,243	1,069
Middle schools				
General	65,083	59,050	55,081	48,600
Technical	—	640	680	670
Agricultural and Vocational	—	—	454	—
Primary schools	—	146,630	146,270	143,330
Nurseries	—	8,790	11,510	—

Sources: Various reports and communiques presented to the Third and Fourth Sessions of the Fifth National People's Congress, August 30, 1980, and December 1, 1981; Ministry of Education, August 26, 1982; and *Xinhua Yuebao (New China Monthly)*, No. 9 (1982) p. 129

stitutions of higher learning of all kinds. To increase university admissions to 10 percent of the population of college age would take annual admissions of 2.4 million—nine times the annual average of 1979-81.[49]

But there are formidable obstacles to rapid expansion of university facilities, beginning with the shortage of faculty. At the end of 1981, there were only 5,078 full professors in the country, 22,541 associate professors, and 128,386 lecturers. Half of the full professors and virtually all faculty at lower levels had received their credentials only since 1978.[50]

Financial constraints are an obstacle to rapid expansion of education at all levels. Overall expenditure for education is now at an all-time high. Allocations for "culture and education, health, and science" amounted to about 11 percent of the national budget during the Fifth Five-Year Plan (1976-80) and are to increase to 15.9 percent during the Sixth Five-Year Plan (1981-85). By 1985, annual admissions to university are projected to reach 400,000, a 48 percent increase from the 1981 figure. But the total yearly enrollment will rise only slightly to about 1.3 million, from 1.28 million in 1981.[51]

Women and education

School admissions in China are also subject to other more subtle barriers. In theory, women and men are entitled to the same educational opportunities. In reality, however, sexual inequality in education still prevails.

In "old China" more than 90 percent of women were illiterate. Before 1949, women accounted for only one-quarter of primary school pupils, 20 percent of middle school enrollment, and just 18 percent of college students. By 1958 there was considerable improvement; nearly 39 percent of primary school children were females and women's share of university enrollments was almost up to 24 percent. Figures reported in early 1981 indicate that girls still fall short of 50 percent of primary school enrollments, which perhaps reflects the sex ratio at birth (105 to 106 males are born for every 100 females in most countries). However, their proportion in middle schools was barely 40 percent and women still accounted for a mere 25 percent in universities and colleges.[52]

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Nearly all Chinese children now attend primary school, but increasing enrollment at higher levels faces formidable obstacles.

Quality via Eugenics

Health is as important as education in the stress on "better" hands over more hands which Chinese policymakers now see as the key to a speedy economic breakthrough. Better health as part of improved population quality has become particularly important with the advent of the one-child-per-family campaign. Couples restricted to one child need extra reassurance that that child will be healthy. Guaranteeing healthy babies has come to mean "quality control" via prenatal and premarital measures as well as better postnatal care of the new generation.

Congenital malformation among infants has been estimated as high as 20 per 1,000 births. Retarded children and adults are said to have totaled more than 10 million in 1979.[53] Concern with such findings has led to the inclusion of eugenics as one component of China's rapidly expanding population studies.[54] Also, Article 6 of the 1980 Marriage Law specifically prohibits marriage among persons who "are direct blood relations, collateral relatives within three generations, and lepers or carriers of diseases medically deemed to be unfit for marriage."

The ban on marriage among close relatives is of special interest. One study estimated that 3 to 9 percent of infants born to couples who are first cousins are affected by hereditary diseases, compared with barely one-tenth of 1 percent among offspring of marriages of unrelated persons. One writer recently warned: "As marriages are very prevalent among close relatives and persons of same surnames in our nation's vast countryside and mountainous districts . . . prevention of marriages of this type cannot be delayed even one minute."[55] This warning raises a major question about China's current population distribution policy. As seen in the next section, geographic mobility is now being strictly controlled in order to enhance stability in rural and urban areas. This policy may inadvertently increase the possibilities of marriage among close relatives in the many small villages where the majority of the population resides. This demonstrates how contradictions may arise between different population policy measures.

The revival of eugenics may be as important as the control of population size. Slower growth via fertility control "buys" time for the country to improve the quality of life. But will the application of eugenics improve the quality of babies? This is an intriguing question and developments in this area warrant close attention.

Population Distribution and Policy

China's immense population is very unevenly distributed across the country's 9.6 million square kilometers—the third largest national land area in the world, after the Soviet Union and Canada. Just under 11 percent of the land is cultivated. Most of this arable land is concentrated in 12 eastern provinces along the coast

and largest rivers (Anhui, Fujian, Guangdong, Hebei, Henan, Hubei, Hunan, Jiangsu, Liaoning, Sichuan, Shandong, and Zhejiang) and in the areas administered by the three largest cities or municipalities—Beijing (the capital), Shanghai and Tianjin (see map on page 2). Seventy percent of the country's total population in 1982 lived in these 12 provinces and three province-level municipalities and population density reaches very high levels (see Table 9). For example, there are from 356 to 590 persons per square kilometer in Anhui, Jiangsu, and Zhejiang in the East region and in Hunan and Shandong in the North region. (The most densely populated state in the U.S.—New Jersey—had 596 persons per square kilometer in 1981.[56])

By contrast, population is sparse in the mostly mountainous, cold and dry western regions. Density ranges from only 1.6 to 59 persons per square kilometer in Tibet (in the Southwest region) and in Inner Mongolia, Ningxia, Gansu, Qinghai and Xingjiang (in the Northwest region). These six autonomous regions and provinces take up about 55 percent of the nation's land area but included barely 6 percent of the total population in 1982.

Various measures have been tried over the years to fill the border regions with the surplus population from the cities and densely populated rural areas of the east. During the 1950s there were large-scale planned transfers of settlers to Gansu, Qinghai, Zinjiang, and Inner Mongolia. Faced with inadequate government support, poor soil and the harsh climate, however, much of the resettled population has since returned home. Similarly, most of the tens of thousands of urban youth sent to remote border regions during the "rustication" campaign of the Cultural Revolution have apparently returned to their native cities. China's regional population distribution was as unbalanced in 1982 as in 1953 or 1964. All this makes it unlikely that moving people to China's less densely populated areas can be counted on as a major means of relieving the mounting population pressures in the east of the country.

Urban distribution and growth

High population density in the eastern provinces reflects not only their hugh rural populations but also the concentration of urban population. In 1953, only a few of the then 166 municipalities, or cities, were in the sparsely inhabited provinces and most of them had fewer than 100,000 people. For reasons of national security and to encourage economic development in the interior, steps were taken to relocate old factories and build new ones away from the coastal cities. This had an impact on distribution of the urban population already by the late 1950s. In 1947, nearly two-thirds of China's urban population resided in the eastern coastal provinces and municipalities. By 1973, more than half of the urban population lived in the western part of the country (see Table 10, page 28).

The 1982 census reported 144.7 million persons in 236 cities and 61.9 million in 2,664 towns. The urban population (206.6 million) thus amounted to 20.6 percent of the total population. The 1982 census report stated that this was up from an urban population of 127 million, 18.4 percent of the total population, at the time of the 1964 census. The 1953 census had indicated an urban proportion of 13.3 percent, and in 1949 the proportion was approximately 11 percent. This suggests that the pace of urbanization has been very slow over the 3½ decades since establishment of the People's Republic, due both to rapid growth of the rural population and numerous measures to discourage migration to cities. (The true rate of urbanization is difficult to determine because China's reported figures on urban population are particularly confusing. For example, the figure of 2,900 "urban places" indicated in the 1982 census release was lower than the total of "more that 3,400" cited in various sources in the late 1970s and much lower than the 1953 census figure of 5,568 ur-

Table 9. Population of Provinces, Autonomous Regions, and Province-Level Municipalities, 1953, 1964, and 1982, and Population Density, 1964 and 1982

Provinces, autonomous regions, province-level municipalities	Population (in millions)			Persons per square kilometer	
	1953	1964	1982	1964	1982
National total	583.16[a]	685.55[a]	1,008.18	74	101
Northeast					
Heilongjiang	11.90	21.39	32.67	43	69
Jilin	11.29	17.89	22.56	84	120
Liaoning	20.56	29.50	35.72	185	245
North					
Hebei	37.88	41.41	53.01	210	282
Shanxi	14.31	12.35	25.29	116	162
Beijing municipality	2.77	7.57	9.23	452	549
Tianjin municipality	2.69	4.28	7.76	553	687
Shandong	48.88	55.52	74.42	363	486
Henan	44.21	50.32	74.42	301	446
East					
Anhui	30.66	31.24	49.66	224	356
Jiangsu	40.93	44.50	60.52	434	590
Shanghai municipality	6.20	10.82	11.86	1,745	1,913
Zhejiang	22.87	28.32	38.88	278	382
Central					
Hubei	27.79	33.70	47.80	180	255
Hunan	33.23	37.18	54.01	177	257
Jiangxi	16.77	21.07	33.18	126	199
South					
Fujian	13.14	16.76	25.87	138	213
Guangdong	36.74	42.80	59.30	101	280
Guangxi Autonomous Region	17.59	20.84	36.42	101	158
Southwest					
Guizhou	15.04	17.14	28.55	97	162
Sichuan	65.68	67.96	99.71	120	176
Yunnan	17.47	20.51	32.55	52	83
Tibet Autonomous Region	1.27	1.25	1.89	1.0	1.6
Northwest					
Inner Mongolia Autonomous Region	7.33	6.24	19.27	10	16
Shaanxi	15.88	20.77	28.90	101	141
Ningxia Autonomous Region	1.94	2.16	3.90	32	59
Gansu	11.59	12.65	19.57	28	43
Qinghai	1.68	2.14	3.90	3	5
Xingjiang Autonomous Region	4.87	7.27	13.08	5	8

Sources: Population: 1953: Hu Huanyong, et al (eds.), *Renkou Yanjiu Lunwenji (Papers on Population Studies)* (Shanghai: East China Normal University Press, 1988) p. 18; 1964: Liu Zheng, et al, *Renkou Tongjixue (Population Statistics)* (Beijing: Chinese People's University Press, 1981) pp. 62-63; 1982: State Statistical Bureau, *Communique on Major Figures in the 1982 Population Census*, Xinhua-English, Beijing, October 27, 1982, in Foreign Broadcast Information Service, No. 82-208, October 27, 1982. Persons per square kilometer: Population Analysis Section, General Office of the Census and State Statistical Bureau, 1982.

[a]Discrepancies between these totals and the 1953 and 1964 totals in Table 2 (page 8) are due to possible "errors" in the original sources.

ban places. In September 1981 it was reported for the first time that the 1964 census had counted an urban population of 97.91 million, but the 1982 census release revised the 1964 urban total upward to 127 million.[57])

Table 10. Regional Distribution of Urban Population: China, 1947-1976

Region	1947	1964	1973	1976
Eastern coastal area[a]	65.3	53.3	47.3	47.8
Western part[a]	34.7	46.5	52.7	52.2
Total	100.0	100.0	100.0	100.0

Source: Youren Wu, "Socialist Urbanization in Our Nation," *Renkou yu Jinghi (Population and Economics)*, No. 2 (1980) pp. 7-12.

[a]The eastern coastal area contains 30 percent and the westen part contains 70 percent of China's total land area.

Since the 17th century, Chinese political scientists have proclaimed that "When the masses dwell in villages, order prevails; when the masses flock to cities, disorder ensues." Mindful of this dictum, Chinese authorities have attempted to halt the cityward movement of rural population since the "blind infiltrations" of the 1950s, which reached a crescendo during the Great Leap Forward of 1958-59. These efforts have included projects to increase employment in rural areas, rules on food rationing and household registration that discourage unauthorized migration, recruiting large numbers of city dwellers for work in rural areas, and "rustication" campaigns of the 1960s and 1970s that sent more than 12.5 million urban middle school graduates to the countryside.[58] Though many of the relocated urban youth seem to have found their way home, the combined anti-urbanization efforts probably did help to slow the pace of urbanization.

However, urban planners have been less successful in stemming the growth of very large cities, which has been another important goal. Chinese cities, or municipalities, are ranked as extra-large (1 million or more people), large (500,000 to 1 million), medium (300,000 to 500,000), and small (20,000 to 300,000). As shown in Table 11, more than 20 small cities "disappeared" into the higher size-classes between 1953 and 1979. Both the medium and large cities more than doubled in number, and by 1979, there were 29 extra-large cities—up from nine in 1953.

The "loss" in small cities was due more to administrative decision not to upgrade other urban centers to the status of cities, or municipalities, than actual decline in number between 1953 and 1979. (By 1982, however, there were 236 cities, according to the census release, up by 45 from the 191 designated cities in 1979, shown in Table 11.) The overall trend was toward greater concentration of the urban population in extra-large cities of 1 million or more people. In 1953, some 40 percent of the urban population resided in the then nine metropolises of this size; by 1979, almost one-half (49.3 percent) of urbanites were concentrated in 29 extra-large cities, with nearly 29 percent living in the 10 municipalities with 2 million or more people. There had been only four cities with 2

Table 11. Cities by Population Size, 1953 and 1979, and 1953-1979 Change in Number

Size designation	Population size-class	Number		Change 1953-79 (percent)
		1953	1979	
Extra large	1 million or more	9	29	+220
Large	500,000-1 million	16	36	+120
Medium	300,000-500,000	10	41	+300
Small	20,000-300,000	131	85	− 35
Total		166	191	+ 15

Source: Zhu Zhuo, "On the Rational Distribution of the Chinese Population," *Renkou Yanjiu (Population Research)*, No. 3 (1980) pp. 11-17.

million or more people in 1953.

Thus, even though China has been successful in directing more urbanization toward less populated regions in the west and holding down the incease in overall urbanization, it has failed to brake further growth in very large cities. This has compounded the problems of housing, transportation, health, safety, and employment, which are particularly acute in cities. The stabilization of urban population has also been difficult because much of the growth occurred within the designated "urban places" themselves. Chinese specialists estimate that a little over one-third of the increase in urban population between 1949 and 1979 was due to the influx of 25 million migrants from rural areas; two-thirds of the growth stemmed directly from natural increase (births minus deaths) within the urban population.[59]

Current urbanization policy

Anti-urbanization measures may have ended mass rural-to-urban shifts like the "blind infiltrations" of the 1950s, but China is still faced with the problem of finding work off the land for a rapidly growing surplus of labor in rural areas. The recent surge in population growth has left 25 to 30 percent of the rural labor force currently underemployed or unemployed. The ranks are sure to go much higher with the recently begun efforts to modernize and mechanize agriculture; Chinese population specialists estimate that mechanization may eventually displace 300 to 500 million peasants from farming and related operations.[60] All this makes rural outmigration inevitable. On the other hand, Chinese planners are still anxious to avoid the growth of large and "extra-large" cities with all their problems. Current policy is thus aimed at a redirection of urban growth.

This is not likely to mean renewed efforts to transplant large numbers of people to remote areas, which proved costly and had little demographic effect. Relocating industries as a means of redistributing population continues, but water shortages and long transportation distances put a limit on industrial development and population settlement in regions remote from the most densely populated areas.

When industries were relocated away from coastal areas beginning in the 1950s, the object was national security and economic considerations, not population redistribution. Though this helped to draw urban population westward, urban growth unrelated to, or in excess of, the needs of industrial development was to be strictly disallowed. Cities were plants, not people.

Now, population matters figure prominently in discussion of the urban future. Redirection of growth is aimed at turning the pattern of Chinese urbanization into one like "stars scattered all over the sky or pieces spread on a chessboard." One plan suggests that if five commune seats in each of China's more than 2,000 counties were developed into small cities of 20,000 people apiece, more than 200 million people could be accommodated in such places.[61] Another plan advocates transforming the more than 2,000 county seats (half of which now have populations between 20,000 and 80,000) into medium and small cities of 100,000 or more population. This would absorb an additional 60 to 200 million people. Still another plan suggests that an average of 2,000 rural persons be relocated in each of the present 110 small cities, some 3,200 towns and county seats, and upwards of 50,000 rural market towns. That would provide employment opportunities for the 100 million peasants who are currently expected to become surplus labor in the villages by the year 2000.[62]

All policy speculations on China's urban future call for the "strict control of the growth of large cities, rational development of medium-size cities, and positive expansion of small cities and towns." The indications are that the last objective is being actively pursued. Since 1978, for example, "freedom of domicile" has been erased from the national con-

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Mechanization could displace 100 million peasants from farming by 2000. Present policy is to relocate them and their families in small cities and towns scattered across the country.

stitution. Violations of regulations on household registration have been dealt with severely, particularly unauthorized residential shifts from rural to urban jurisdictions. Control of geographic mobility remains a centerpiece of China's urban planning. The aims are to minimize population chaos in cities and to stimulate a pattern of decentralized urbanization. A modern version of the 17th century adage, the policy no longer frowns on rural exodus as such. The premise now reads: "When the masses dwell in small cities and towns, order prevails; when the masses flock to large cities, disorder ensues." Its implementation requires that living conditions in small cities and towns be improved. Thus, unlike the 1950s, the emerging urban places are to meet people's needs, not just those of industrialization.

The Family Planning Program

With the launching of the *wan xi shao* campaign in 1971, China's family planning program quickly took on the features that have distinguished it ever since. The main features are:

- Overall population plans and reproductive norms are set at the national level, shaped by the nation's ability to feed, clothe and shelter the people, and to improve living standards.
- Based on the principle of "coordination between state guidance and mass voluntarism," national policy is passed down through successive levels to be translated into actual programs suited to local conditions and implemented at the grassroots level.
- Leaders at all levels are held responsible for achieving birth planning goals, and individual couples are rewarded or penalized depending on their compliance with reproductive norms.
- Birth planning is promoted through every feasible channel, ranging from mass information (posters, TV, radio, newspaper editorials, etc.) to small group and personal meetings where strong peer pressure is exerted.
- All family planning methods are financed by the central government and made widely avaialble.

Organization and implementation[63]

Setting policy at the national level is the Birth Planning Commission (formerly, Birth Planning Leading Group) of the State Council (top body in the government's executive branch). This was headed by Vice-Premier Chen Muhua until the recent appointment of Qian Xinzhong. The Commission is backed up by the State Birth Planning Office which supervises activities throughout the country. At the provincial level there is also a policymaking birth planning committee and an implementing birth planning office which passes final judgment on birth plans submitted for approval from lower administrative levels, organizes mass media campaigns and annual meetings of birth planning officials, etc. At the next lower level, county birth planning offices supply contraceptives to the rural communes and production brigades, reimburse commune health centers for IUD insertions, sterilizations,

Table 12. IUD Insertions, Sterilizations, and Abortions: China, 1971-1977

(Numbers in thousands; percentage distribution in parentheses)

Year	IUD insertions	Sterilizations		Induced abortions	Total
		Female	Male		
1971	6,173	1,745	1,224	3,910	13,052
	(47.4)	(13.4)	(9.4)	(29.9)	(100)
1972	9,220	2,087	1,716	4,814	17,837
	(51.7)	(11.7)	(9.6)	(27.0)	(100)
1973	13,950	2,956	1,933	5,110	23,949
	(58.2)	(12.4)	(8.1)	(21.3)	(100)
1974	12,580	2,276	1,445	4,985	21,286
	(59.1)	(10.7)	(6.8)	(23.4)	(100)
1975	16,744	3,260	2,653	5,084	27,741
	(60.3)	(11.8)	(9.6)	(18.3)	(100)
1976	11,620	2,700	1,490	6,570	22,380
	(51.9)	(12.1)	(6.7)	(29.3)	(100)
1977	12,974	2,776	2,616	5,229	23,595
	(55.0)	(11.1)	(11.1)	(22.1)	(100)
1971-77	83,261	17,800	13,077	35,702	149,840

Source: Zhang Lizhong, "Birth Control, Late Marriage, and Decline in the Natural Increase rate of Population," *Renkou yu Jingji (Population and Economics)*, No. 1 (1980) pp. 35-39.

and abortions, direct county-level information activities, and keep records and statistics. There is also a birth planning leadership group at the commune level and another at the brigade level which supervises the barefoot doctors and other personnel who deliver contraceptives to households and accompany men and women to the commune health center for one of the four "birth planning operations"—tubectomy, vasectomy, IUD insertion, or abortion.

The brigade group (or resident committee in urban areas) organizes group and personal meetings to ensure compliance with reproductive norms and birth quotas. It draws up local birth plans for the coming year, giving priority to newlyweds who marry late and (until the one-child campaign) couples with one child aged three or more. Once the plans are adjusted and approved at higher levels, couples authorized to have a child are issued a planned birth certificate which must be shown at all prenatal visits. Unauthorized births are defined as "unplanned." Community-level groups are also supposed to provide incentives to people undergoing birth planning operations and couples pledging to have only one child.

At all levels of the organizational hierarchy, birth planning units work closely under Communist Party leaders and involve members of mass organizations like the Women's Federation, police, school systems, etc., as well as the health establishment.

Contraceptive methods. About 70 percent of Chinese couples of childbearing age were estimated to be practicing contraception in 1978, about the same level as in the U.S. More recent figures range as high as 84 percent in Jiangsu and Hebei provinces. About half of all contraceptors use IUDs; there were some 83 million IUD insertions between 1971 and 1977 (see Table 12). Sterilization is the second most widely used method, relied upon by some 30 percent of contraceptors. Between 1971 and 1977 nearly 18 million female sterilizations (tubectomies) and 13 million male sterilizations (vasectomies) were

performed, as seen in Table 12. Pills are available and popular in larger cities; condoms, though available, are little used. Abortions, though officially approved only in cases of contraceptive failure, are common, amounting to an estimated 318 abortions per 1,000 live births in 1978. (The comparable figure in the U.S. in 1978 was 400.[64]) People undergoing one of the four birth planning operations are entitled to paid leave ranging from a few days for an IUD insertion (or removal) up to as much as 70 days for a woman who has a sterilization following a "planned" birth in some areas, plus nutrition allowances and bonuses in some cases.[65] Although voluntarism is stressed as a guiding principle, there are frequent reports of local birth planning cadres concerned to meet birth quotas who "mobilize" men and women to undergo sterilizations or "persuade" women with unplanned pregnancies to undergo abortion. As China strives to meet its increasingly stringent population objectives, such cases are bound to increase, along with the level of sterilizations and abortions.

From wan xi shao to one child

Late marriage, first promoted in the brief family planning campaigns during the 1950s and 1960s, was at first the most visible component of the 1970s campaign—*wan xi shao:* later (marriage), longer (intervals between births), fewer (children). However, fertility recommendations soon became more explicit, couched in terms of the Zhou Enlai model of "one is not too few, two are good, three are too many." Implicit in this model was the two-child family ideal.

The two-child family ideal fitted well with early goals of the 1970s which called for reducing the rate of natural increase to between 9 and 10 per 1,000 population by 1980. Renewed access to foreign demographic literature, however, propagated the notion of zero population growth among Chinese population specialists, and the goal was revised to ZPG by the year 2000. Leading policymakers were quickly persuaded to adopt the now renowned "one-child-per-couple" policy.

Its adoption followed calculations which showed that even strict adherence to the *wan xi shao* model could not avert a rise in the natural increase rate as the 1962-72 baby boom cohorts reached the ages of marriage.[66] Some 9.63 million women reached age 22 in 1980 and this figure will rise to 14.5 million in 1985. At a June 1978 meeting of the State Birth Planning Leading Group, Li Xiushen, Director of the Group's Staff Office, pointed out that such data indicated the need for "an adjustment in the frequency of births." The Leading Group accordingly resolved that: "One birth be considered the best, two births the maximum, and a third birth strictly regulated." The "one child is best" norm was approved by the State Council and formally endorsed in 1978 by the Central Committee of the Chinese Communist Party (the country's paramount authority).[67]

The national goal established in 1978 was that by 1985, 80 percent of annual births in urban areas should be first births and 50 percent in rural areas. Chen Muhua raised the goal in a February 1980 speech:

> "We will try to attain the goal that 95 percent of married couples in the cities and 90 percent in the countryside will have only one child in due course, so that the total population of China will be controlled at about 1.2 billion by the end of the century."[68]

From voluntarism to incentives

To gain an idea of how the masses would accept this radical new norm, the Leading Group called for sample surveys in several provinces and municipalities of the proportion of couples with one child who would voluntarily forego further childbearing. As shown in Table 13, the idea was evidently highly unpopular, at least in 1978 and 1979. Urban couples were more likely to be willing to stop at one child, but with the majority of people living in rural areas, the low proportions of willing couples in the rural areas surveyed suggested that no more than one

Table 13. Couples Who Would Voluntarily Have Only One Child: Various Localities, 1978-1979

(Numbers = percentages of all couples surveyed)

Locality	Place of residence		
	Urban	Suburban	Rural
Shanghai[a]	60.0	19.0	1.9
Fuzhou, Fujian	18.5	—	—
Changsa, etc., Hunan[b]	34.6	—	—
Hebei province	11.4	—	11.4

Source: Li Xiuzheng, "The Present Situation and Tasks in the Planned Reproduction Work," *Renkou Yanjui (Population Research)*, No. 1 (April 1980) pp. 3-5.

[a]Sample size was 16,768. [b]Sample size was 3,719.

or two of every ten couples in the nation would voluntarily stop at one child. Even in 1981, a survey in Hubei province revealed that rural dwellers want at least two children. Of 728 childbearing women questioned, less than 5 percent wanted only one child; 51 percent wanted two; 28 percent wanted three; and 16 percent wanted four.[69]

Such findings suggested that attaining the one-child ideal required more than "mass voluntarism." Thus, at a national conference of family planning officials in January 1979, the Birth Planning Leading Group called for countrywide adoption of a system of rewards and penalties already being used in the municipality of Tianjin and province of Guangdong.[70]

The stipulations referred to one-child couples who pledged to have no more and received what became known as "only child glory certificates." In Guangdong, the certificates entitled couples to free medical care and school tuition for their only child. Other provinces, most notably Sichuan, soon added direct monthly payments in cash (in urban areas) or work points (in rural areas, where work points determine the individual's share of the collective's food and supplies), preferential treatment in housing, eventual job priorities for the single child, extra old-age pensions for parents of single children in urban areas and in rural areas a guaranteed standard of living for such parents in their old age, equal to or higher than the local average. Penalties were also added to the list soon adopted by provinces and cities across the nation. Like incentives, these vary widely, but commonly require that parents who break their pledge by having a second child must return all stipends and work points received. Those who go on to a third have their monthly wages reduced by 10 percent or more, must remain in housing meant for a two-child family, and are charged for the extra child's grain ration. Multiple births are an exception to these rules. Also, if an only child dies, parents may have another without penalty.

In 1979, high Party and government officials drafted a national family planning law which stipulated nationwide application of incentives for the one-child family and disincentives for more than two births. Going beyond the "advocacy" of family planning in the constitution of 1978, this would make it legally obligatory throughout the country to practice family planning in general and the one-child family in particular. However, the law was voted down when presented to the National People's Congress in August 1980.

Delegates opposing the law argued that the one-child norm would lead to aging of the population, shortages of labor and males of military age, unbalanced sex ratios, and a situation of one young couple having to support four parents and one child (the "4-2-1" population structure). Others have been concerned that only children might have low IQs and be spoiled. The unabated fear of child mortality would also be a hindrance to legislated compliance with the one-child norm.[71]

Though not yet written into national law, the one-child family is now national policy, implemented to varying degrees throughout the country by provincial and local administrative measures. In September 1980, the Central Committee of the Party issued an open letter to all Party and Communist Youth League

members, calling on them to set an example by themselves having only one child and to "actively, conscientiously, and patiently publicize the call among the broad masses."[72]

One-child campaign results

Early results of the one-child campaign appear impressive, despite general aversion to the notion of a single child indicated by the opinion surveys conducted in 1978 and 1979 before the campaign swung into high gear. In June 1981, Chen Muhua reported that over 11 million one-child certificates had been issued, covering 57 percent of the estimated total of 20 million couples with one child.[73] By August 1982, it was reported that the total of one-child certificates had risen to over 15 million and that 60 percent of all births in the first half of the year had been first births, compared to 56 percent in 1981.[74] At the end of 1982, Qian Xinzhong, newly appointed head of the State Birth Planning Commission, announced that couples pledging to stop at one child accounted for more than 70 percent of all married couples in the three largest municipalities (Beijing, Shanghai, and Tianjin) and in five provinces (Liaoning, Shandong, Jilin, Heilongjiang, and Jiangsu).[75]

As in all previous campaigns, the results vary, especially between urban and rural areas. In 1980, for example, the city of Suzhou in Jiangsu province reported that 95 percent of all one-child couples had pledged to have no more, in contrast to only 25 percent in rural areas of Guangdong province. Also, the different ways of measuring progress can be misleading. The current proportion of first births among total annual births is doubtless inflated by the surge in marriages since the new marriage law went into effect in January 1981. Records of the percentages of all one-child couples who have received one-child certificates overlook the behavior of couples with two or more children. The full impact of the one-child campaign will only be known when the women now entering the childbearing ages have reached the end of their fertile years.

Two 1980 surveys in the city of Hofei in Anhui province and in Beijing revealed that holders of one-child certificates tended to be older than single-child parents who had not pledged to have no more children, and their single child was more likely to be male and at least seven years old.[76] This suggests that high percentages of one-child certificate holders reported in the early years of the campaign may have been inflated by couples who had already been limiting their fertility for some time and felt secure in the knowledge that their single, usually male child had survived the most perilous years of childhood. Besides being more recent parents and more likely not to have a son, non-certificate-holding families were more likely to be poor (monthly income per person below 20 yuan; 1.53 yuan = U.S.$1.00 at end of 1980). The benefits offered along with "only child glory certificates" seem to have been less than enough to persuade them to stop at one child.

Current Issues and Outlook

The 1982 census data cited in this *Bulletin* are limited to the broad, manually-tabulated findings released in October 1982. A clearer view of China's population scene should begin to emerge in 1984 when publication of detailed data, now being processed by computer, is due to start.* Meanwhile, what are the current problems in limiting fertility and the prospects for achieving the goal of a population totaling no more than 1.2 billion in 2000? There are still difficulties in persuading the Chinese masses to adopt strict family planning and even more in implementing the one-child goal.

Barriers to fertility limitation

Child costs and family interests. In 1982, a Chinese population specialist described the conflicts which strict family limitation still present for Chinese rural

Table 14. Family and Public Costs of Raising a Child to Age 16 in Urban and Rural Areas: China, 1979

(1 yuan = U.S. $0.51 in March 1983)

Item	Large cities		Towns		Villages	
	Yuan	Percent of total	Yuan	Percent of total	Yuan	Percent of total
Family expenditures						
Food, etc.	4,224	61.2	3,466	71.9	1,100	67.3
Health	240	3.5	240	5.0	24	1.3
Education	225	3.3	150	3.1	72	4.4
Total for family	4,689	68.0	3,856	80.0	1,196	73.0
State or collective costs						
Health	241	3.5	241	5.0	49	3.1
Education	560	8.0	550	11.4	365	22.6
Urban services, etc.	1,120	16.2	0	0	0	0
Other[a]	297	4.3	173	3.6	20	1.3
State or collective total	2,218	32.0	964	20.0	434	27.0
Overall total	6,907	100.0	4,820	100.0	1,630	100.0

Source: Adapted from Z. Liu, C. Wu, and R. Zha, *Renkou Tongjixui (Population Statistics)* (Beijing: Chinese People's University Press, 1981) pp. 369-370.

[a]Includes payments for prenatal examinations, delivery and childcare subsidies.

couples in particular:

"The family is still the primary unit of consumption and procreation, and the number of births is closely tied to family economic interests. In deciding how many children to have, parents take into account the costs of bringing up a child until it reaches working age. But they also consider that when the child grows up it will contribute to family income and, in particular, provide the parents insurance for their old age."[77]

Estimates as of 1979 shown in Table 14 indicate that raising a child to age 16 costs much more in large cities and towns than in rural villages. In large cities, expenditures by the family itself average 20 to 25 yuan a month (1 yuan = U.S. 51¢ as of spring 1983). This is a huge sum in relation to the average monthly per capita wage of 61 yuan in the industrial-urban sector in 1981.[79] The total average family expenditure on a child to age 16 in large cities (4,689 yuan) is nearly four times the average in rural areas (1,196 yuan). For the state also there is a much greater financial benefit in limiting births in urban areas than in rural areas. For each child up to age 16, health and education costs for the state in large cities (801 yuan) average nearly twice the costs for a rural child (414 yuan).

However, China's population prospects are determined by the fertility behavior of the 80 percent of the population living in rural areas. The fact that the state or collectives have not been able to spend nearly as much on children's edu-

[78]Thirty-one volumes of data are to be published from the 1982 census. Data from the 1953 census, published in 1954, amounted to two pages. From the 1964 census, provincial population totals only appeared in 1972 and a few other findings in 1980-82. The 1982 census questionnaire completed for each household includes information on: household location (urban/rural, etc.); household births and deaths in 1981; name, sex, age, ethnic origin, place of residence and registration of each person in the household; level of schooling for each person aged six and over; occupational status (industry and occupation if working, whether student, looking for job, housekeeper, retired, etc. if not working) and marital status for each person aged 15 and over; children ever born and if now living for women aged 15-64; and children born in 1981 and birth order for women aged 15-49.[78]

cation and health in rural areas as in large cities and towns indicates that, for most of China's population, the family is still almost wholly responsible for the welfare of its members.

This is especially true for elderly members of the family. At present, there is an adequate old-age pension system only for people employed in the state-owned urban-industrial sector who make up, at most, 10 percent of the total population. A survey reported in 1982 of some 3,500 production brigades (villages) in 11 provinces and municipalities indicated that only 1 percent of men aged 65 and older and women aged 60 and older were receiving pensions of 10-15 yuan a month paid by the community.[80] Thus, children are plainly valuable for rural parents and the absence of an adequate state-provided pension system for China's vast rural population is a major barrier to fertility limitation.

Agricultural responsibility system. Another potential barrier is the "responsibility system" adopted since 1979 in order to boost agricultural production. Formerly, peasants were assigned specific tasks and paid in work points determined by the income from the land farmed collectively by the production brigade or team. Now, in most areas, one household, or a group of households, is assigned a specific plot to work independently and an annual quota. They may keep or sell on the free market any food produced beyond this quota. Once again, it pays peasants to have more children to help increase output and boost family income as they reach working age, and there are no work points to award to couples who sign up for one-child certificates or to deduct from those who break the pledge to stop at one child. To combat this threat to limited fertility, some localities have introduced "double quota contracts": households must both deliver their farm output quota *and* refrain from having an unauthorized birth, or pay a severe fine. Anhui province has gone further: parents of a single child are now to receive double the usual size plot for that child; parents of second and later children will lose all land previously assigned to them to manage. In many localities the Communist Party and administrative cadres have been put on a "post-responsibility" system in which the bonuses that can make up 20 to 30 percent of their annual income now depend not just on overfulfillment of their commune's farm product quota, as in the past, but also on not exceeding birth quotas.

Barriers to the one-child norm

High benefit costs. So far, urban employing units and rural production teams have been responsible for the monthly allowances, medical and education fees, priority housing, and other benefits promised to one-child certificate holders. These can be an intolerable drain on the welfare funds of unprofitable urban enterprises and endanger the living standards of other families in poor rural areas. In one urban unit, for example, two-thirds of its welfare fund had to be used as subsidies and payments to one-child certificate holders. In the 1980 Hofei city survey, some one-child certificate holders reported that they had received only "a couple of towels, a thermos bottle, some toys, a washing basin, or nothing at all." Although a fund earmarked for one-child incentives would be a burden in a country with a per capita GNP of barely $300 per year,[81] strict and equitable enforcement of the one-child family clearly requires some such national scheme. This has been discussed at high levels but no final decision has been announced.

Persistent male preference, as noted, is a strong barrier to the one-child norm. Despite official efforts to discourage discrimination against females, a recently reported study cited sex ratios among infants under one year of 154 males to every 100 females in one urban neighborhood and up to 503 in the villages studied.[82] Officially, young men are now being encouraged to move in with in-laws when they marry an only daughter but if an only son marries an only daughter, the couple

can live with only one of the two sets of parents and yet must financially support both sets of parents. Therefore, it makes sense for parents to have a minimum of two children, regardless of sex. Given an almost even number of each sex at birth, in the long run no more than 50 percent of all couples are likely to have only one child.[83]

Chinese officials recognize that strong male preference may require some exceptions to the one-child rule. Recently it was recommended that:

"The vast number of people in the villages and the peasants, herdsmen, fishermen, and other residents in suburban areas of municipalities should be encouraged to have no more children on a voluntary basis if their first child is a female. But, if they still desire to bear another, permission should be given."[84]

Intensified efforts

Despite the difficulties of persuading couples to adopt the one-child norm and the extra demographic pressure now being exerted by the coming-of-age of the baby boom generation, Chinese officials have stepped up efforts to limit population in order to improve living standards. At the September 1982 National Congress of the Chinese Communist Party, it was stated that "We must work hard to limit the population within 1.2 billion by the end of this century."[85] The Sixth Five-Year Plan (1981-85) approved by the National People's Congress in December 1982 stipulates that (1) the total population be kept below 1.06 billion by 1985, the birth rate at 19 per 1,000 population, and the rate of natural increase to 13 per 1,000, and (2) that population planning also be introduced in minority areas. It calls for energetic promotion of the one-child-per-couple policy, aiming to "vigorously raise the 'one-parity birth ratio,' to strictly control second births, and to resolutely put an end to higher parity births."

Qian Xinzhong, Director of the State Birth Planning Commission, predicted in November 1982 that a national family planning law—though aborted in 1980—would be adopted in two years.[86]

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Even if the firstborn is a girl, most couples will have to stop at one child if China is to succeed in its drive to keep the total population under 1.2 billion in 2000.

This is to include measures to reward one-child couples, to discourage two or more children and to encourage late marriage and late childbearing, and provisions for family planning programs in minority regions.

A nationwide drive between January 1, 1983, and the Spring Festival (Chinese New Year) on February 13 marked the renewed efforts to control population growth. Teams of officials were dispatched into the countryside to promote the one-child policy, accompanied by doctors to insert IUDs and perform abortions. Despite such special efforts, however, and the impressive results of the one-child campaign so far, at least in cities and nearby surroundings, the overall indications are that the average family size in China is unlikely to drop to just one child per couple. (The total fertility rate, which indicates the average number of children women would have if childbearing con-

tinued at the current level, was 1.8 in the U.S. in 1981.)

Population growth prospects

Whether or not the Chinese population will exceed 1.2 billion in the year 2000 is an irresistible question. With the total already over 1.008 billion in mid-1982, only an increase of no more than 11 million a year between 1982 and 2000 would prevent a larger figure.

Official data indicate that some 240 million couples will successively come of age over these 18 years, yielding an average of 13 million marriages a year. First births will be as numerous. For 1983, the national population goal is to limit first births to 63 percent of total births and to reduce third and higher order births to less than 5 percent. The rest (32 percent) are to be second births. If neither of the latter goals is realized, births in 1983 will total more than 20 million, as was the case in 1981, according to the 1982 census findings. Thus, allowing for low death rates, it is extremely likely that the Chinese population will exceed the hoped-for limit of 1.2 billion, probably by 150 million, and reach 1.35 billion in the year 2000 if not before. And even to keep to this nearly 13 percent higher figure will mean that the level of birth control, particularly sterilizations and probably also abortions, must continue at least as high if not higher than the high levels that produced the rapid birth rate decline of the 1970s.

Reflections

China's demographic trends and policies of recent years have earned both strong admiration and severe admonitions from watchers the world over. Most admonitions have focused on the use of coercion to prevent or terminate unplanned pregnancies. Instances of coercive sterilization and abortion clearly in violation of the dual principle of state guidance and mass voluntarism have indeed occurred and been criticized in the Chinese press. Of course, these misdeeds should not be condoned. But they should also not be exaggerated for they are not official measures but only local misfeasances.

Coercion has also become an issue in the global context of state authority versus the reproductive rights of individuals. After decades of struggle, methods to control fertility are now widely available and what can be called "coercive parenthood" has ended in most countries and married couples are free to limit childbearing to maximize their family well-being. However, there are few precedents by which to judge the authority of the state to curb fertility. State control of individual behavior in other areas is accepted; for example, few people question the need for compulsory education which still involves penalties for noncompliance. Given the unprecedented global population growth since the 1940s and particularly in China, the world's most populous country, shouldn't a limit to parenthood be set by society to promote the interests of all citizens?

China has answered in the affirmative. A temporary limit to parenthood has been set in accordance with the nation's ability to feed, clothe, and shelter all its people now and to improve living standards in the future. If a couple has a child out of turn or in excess of the limit, the pair infringes on the well-being of others. The penalties are the same for all noncomplying couples. No social discrimination is involved; both social justice and societal welfare are observed. China has learned how difficult it is to manage the population affairs of a huge nation, as any married couple quickly learns how hard it is to run the affairs of a large family. Of the world's first demographic billionaire—with all its population assets, anxieties, and aspirations—it can be said that "a country is a family is a country."□

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